.

```
April 21, 2005, 21:13:15; Search time 2021.2 Seconds (without alignments) 813.555 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                  l atggaaaagtatgaaaaatt.....aggtacttccgctcaaaagt 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pending Patents NA New:*

1: /cgn2_6/ptodata71/pna/PCT_NEW_COMB.seq:*

2: /cgn2_6/ptodata/1/pna/PCT_NEW_COMB.seq2:*

3: /cgn2_6/ptodata/1/pna/PCT_NEW_COMB.seq2:*

4: /cgn2_6/ptodata/1/pna/US07_NEW_COMB.seq:*

5: /cgn2_6/ptodata/1/pna/US07_NEW_COMB.seq:*

6: /cgn2_6/ptodata/1/pna/US09_NEW_COMB.seq:*

7: /cgn2_6/ptodata/1/pna/US10_NEW_COMB.seq:*

8: /cgn2_6/ptodata/1/pna/US10_NEW_COMB.seq2:*

9: /cgn2_6/ptodata/1/pna/US10_NEW_COMB.seq2:*

10: /cgn2_6/ptodata/1/pna/US11_NEW_COMB.seq2:*

11: /cgn2_6/ptodata/1/pna/US11_NEW_COMB.seq2:*

12: /cgn2_6/ptodata/1/pna/US11_NEW_COMB.seq2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18337526
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9168763 seqs, 789795712 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                        IDENTITY NUC Gapox 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                             US-10-766-691-9
1041
                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                          Run on:
```

		de			200	
Result No.	Score	Query Match	Query Match Length DB	DB	ID	Description
1	729.6	70.1	1618	2	PCT-US05-03526-3	Sequence 3, Appli
7	572	54.9	1400	10	US-11-060-756-23	Sequence 23. Appl
٣	572	54.9	1400	10	US-11-060-756-4295	Sequence 4295, Ap
4	567.4	54.5	9	10	US-11-060-756-22	Sequence 22, Appl
r)	567.4	54.5	9	10	US-11-060-756-4294	
9	368	35.4	600	10	US-11-060-756-1500	Sequence 1500, Ap
7	368	35.4	9	10	US-11-060-756-1501	
80	368	35.4	009	10	US-11-060-756-5772	٠,
σ	368	35.4	9	10	US-11-060-756-5773	Sequence 5773, Ap
10	343.8	33.0	1175	10	US-11-060-756-3884	
11	343.8	33.0	1175	10	US-11-060-756-3885	3885,
12	343.8	33.0	1175	10	US-11-060-756-8156	Sequence 8156, Ap
13	343.8	33.0	1175	10	US-11-060-756-8157	Sequence 8157, Ap
14	285.6	27.4	009	10	US-11-060-756-37	Sequence 37, Appl
15	285.6	27.4	009	10	US-11-060-756-38	Sequence 38, Appl
16	285.6	27.4	9	10	US-11-060-756-4309	Sequence 4309, Ap
17	285.6	27.4	009	10	US-11-060-756-4310	Sequence 4310, Ap
18	241.2	23.2	1993	7	PCT-US05-03526-1	Sequence 1, Appli
19	202.6	19.5	1513	7	PCT-US05-03526-2	Sequence 2, Appli
20	177.4	17.0	1158	œ	US-10-450-763-6133	Sequence 6133, Ap
21	177.2	17.0	3399	7	PCT-US05-03526-4	Sequence 4, Appli

Sequence 523, App Sequence 4195, App Sequence 473, App Sequence 373, App Sequence 374, App Sequence 1012, App Sequence 1012, App Sequence 1727, App Sequence 313, App Sequence 244, App Sequence 244, App Sequence 241, App Sequence 241, App Sequence 4514, App Sequence 4514, App Sequence 4514, App Sequence 6414, App Sequence 8114, App Sequence 8114, App Sequence 8116, App Sequence 8114, App Sequence 8116, App Sequence 8116, App Sequence 414, App App Sequence 414, App App Sequence 414, App App Sequence 414, App App App App App App App App App Ap	
10 US-11-060-756-523 10 US-11-060-756-373 10 US-11-060-756-374 10 US-11-060-756-364 10 US-11-060-756-4646 10 US-11-085-606-1012 10 US-11-085-606-1012 10 US-11-085-606-1012 10 US-11-099-266-92 10 US-11-090-266-92 10 US-11-060-756-309 10 US-11-060-756-313 10 US-11-060-756-245 11 US-11-060-756-242 12 US-11-060-756-242 13 US-11-060-756-242 14 US-11-060-756-242 15 US-11-060-756-242 16 US-11-060-756-242 17 US-11-060-756-242 18 US-11-060-756-242 19 US-11-060-756-242 10 US-11-060-756-242 10 US-11-060-756-242 11 US-11-060-756-242 12 US-11-060-756-242 13 US-11-060-756-242 14 US-11-060-756-242 15 US-11-060-756-242 17 US-11-060-756-242 18 US-11-060-756-242 19 US-11-060-756-242 10 US-11-060-756-242 10 US-11-060-756-441 10 US-11-060-756-451 10 US-11-060-756-451 11 US-11-050-7748-92	
11323333333333333333333333333333333333	
0.00.000000000000000000000000000000000	
176.2 176.2 173.4 153.4 153.4 153.4 154.0 146.2 142.6 142.6 142.6 134.8 133.2 116.2 115 115 115 115 111.2	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	

## ALIGNMENTS

	د	USE													
		OF U													
			ć		<b>m</b>	555	123	615	183	675	243	735	303	5	
	• •	БТН		_	2 - 9									C 795	- 361
		2 Q	į	Gaps	AATG	AATG	ATGA	ATGA	ATCC	ATCC	TTGA	TTGA	ATGG	CTGA	ATA-
		SI			TTC.	-5 -1	SAAG	SAAG	AAA -	AAC -	STTT	STTT	3CTG	BATT	ATAC
		SNES	1	114;	GTA	GTA	TCT.	TCT	TTA	TTA	TTA	TTA	GTT	ATG	CAT
		НОСІ	Length	ndels	GGT	GGT	GGA	GGA	GCAZ	- 0 - 0 - 0	GCA	- GC-A	TGG2	TGG	CTG
		MORE	Len	ou t	ATGG	ATGG	TTG	TTGT	TGAA	TGA.	AAAT	AAAT	CAAA	CAAA	ATTI
		BRANCHING MORPHOGENESIS AND METHODS 6	2 4 7	4 .,	TCTT	ici.	TAAA!	AAAT	ATGT	ATGT	AGGA	AGGA	AACC	AACC	CTTA
		ANCH	e-1		999	-000	AA =	TAPA	CGT	CGT	AA-	- A	AAGA	ABGA.	AGCT
		; BRJ	. (	Mismatches	AGA!	AGA.	TGT	TGT	TAA	AAT	GAG	GAG	GGA	GGA	TCA
		(7 03 E	729 No.	smar	25.	-5 -5 -5	TAG	TAGO	GAG	GAG	TCAG	TCAG	AGCT	AGCI	CACI
	3, Application PC/TUS0503526 NFORMATION: IT: EXELIXIS INC.	INVENTION: MBMS AS MODIFIERS OF B FERRUCE: EXOS-003C-PC APPLICATION NUMBER: PCT/USOS/03526 FILING DATE: 2005-01-27 FLING DATE: 2004-01-28 FILING DATE: 2004-01-28 FEG ID NOS: 8 S: PatentIn version 3.2 ) 3 S: PatentIn version 3.2 ) 3 MM: Homo sapiens	Score 729 Pred. No.	Ę	GAAAAGTATGAAAAATTAGCTAAAGACTGGAGAAGGGCTCTTATGGGGTTGTATTCAAATGC	GACCCGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATCAAATGC	AGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGATGT	agaaacaaaactctggacaagtagtagctgttaaaaaatttgtggaatctgaagatgat	CCTGTTGTTAAGAAATTAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCA	CCICITICITAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCA	AATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGGAATTTTGAA	AATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTTGAA	TACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGA	TACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGTATGGATTCTGAC	GTGATCAAAAGGGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATA
	S050	BMS AS MODI 003C-PC UMDER: PCT/ UMDER: US60/5 8ER: US60/5 04-01-28 rsion 3.2		 o	AGCT	AGCT	ACAA	ACAA	AGCA	AGCA	GGAG	CGAG	TTA	TTT	ATGG
	C/110	AS C-PC C-PC C-PC C-PC C-PC C-PC C-PC C-P	70.1%;	e e	AATT	ATT	27.0	TGG	AAAT.	AAT	CAT	CAT	CACT	CACT	FATT
	on PC, INC.	18MS 10MB 10MB 10MB 10MB 10MB 10MB 10MB 10MB	66.7	Conservative	AAA.	AAA	DO I	CCT	AGA.	AGA	50-	- N	ATA(	'ATA	GCG.
	atio N: IIS.	CON: MBM EXOS-00 TION NUM ATE: 2 NN NUMBE: E: 2004 IN VERS: 8 IN VERS	ity	Ber	TAT	TAT	AAA!	AAA	GTT	GTT	GTG	GTG	GATC	GATC	PAAA
	plic Pric	INVENTION: MEMS AS TERRUCE: EXOS-03C-F APPLICATION NUMBER: 2005-PLICATION NUMBER: 2005-PLICATION NUMBER: ULING DATE: 2004-01-PF SEQ ID NOS: 8 FROM DATE: 2004-01-PF SEQ ID NOS: 8 FROM DATE: 2004-01-PF SEQ ID NOS: 8 IS PAT	ilar		AAAG	-000	AAAC	AAAC	TGT	TGT.	TCT	TCTT	CTG	CTGT	GATC
26-3	FORM	INVERING SEC	h Sim	273,	4- 42=		64 AG		-	_			-		4 GT
-035		NT AND FILL R OF THE STATES NO THE STATES NO THE STATES NO THE STATES NO STA	Matc ocal			496	9	556	124	616	184	919	244	736	304
LT 1 3805	Sequence 3, Application GENERAL INFORMATION: APPLICANT: EXELIXIS.	TITLE OF INVENTION: MBMS AS MODIFIERS FILE REFERENCE: EXO5-003C-PC CURRENT APPLICATION NUMBER: PCT/USO5/O CURRENT FILING DATE: 2005-01-27 PRIOR APPLICATION NUMBER: US60/539,835 PROR FILING DATE: 2004-01-28 PROR FILING DATE: 2004-01-28 SOFTWARE: PatentIn version 3.2 SEQ ID NO 3 LENGTH: 16.18 TYPE: DNA ORGANISM: Homo sapiens T-US05-03526-3	Query Match Best Local Similarity	Marches											
RESULT 1 PCT-US05-03526-3	Sec	TITLE OF INVE FILE REFRENC CURRENT APPLI CURRENT FILING PRIOR FILING NUMBER OF SEG SOFTWARE: PAt SEQ ID NO 3 LENGTH: 16.18 LENGTH: 16.18 TYPE: DNA ORGANISM: HO PCT-USO5-03526-3	Beg	Mai	à	qq	ò	qq	à	QQ	ò	ор	λ	쉱	ò
					•	H	•		•	_	J	I	•	П	0

```
APPLICANT: Worth
APPLICANT: Wounts, William Martin
APPLICANT: Wounts, William Martin
APPLICANT: Wounts, William Martin
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
FILE REFERENCE: AM101083 (031896-042000)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
SEQ ID NO 4295
LENGTH: 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            573
                                 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            597
                                                                                                                                                                                                      657
                                                                                                                                                                                                                                                                                                                                                                              813
                                                                                                                                                                                                                                                                                                                                                                                                              837
                                                                                                                                                                                                                                                                                                                                                                                                                                                873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    933
                                                                                                                                    597
                                                                                                                                                                      633
                                                                                                                                                                                                                                        693
                                                                                                                                                                                                                                                                          717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    957
                                                                                                                              CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGTGGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTT
                                                           478 ATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTT
                                                                                                                                                                                                                                                                            658 CTGATAATCAGAACACTAGTAGAAACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAA
                                                                                                                                                                                                                                                                                                            CTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAA
                                                                                                                                                                                                                                                                                                                            CICTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                TTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                        598 gcadadericerdacadeceadeceacrerdecerdeaaaareadarerdeaceaceacritar
                                                                                                                                                                                                                                          CTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAAAAGAAAAGCACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454 ATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTT
                                                                                                                                                                        GCAGAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTAT
                                 454 ATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTT
                                                                                                     CTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54.9%; Score 572; DB 10; I
100.0%; Pred. No. 3.9e-110;
ive 0; Mismatches 0;
 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGAAGGAAGAACAGAAGACGCCAACAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1018 AATGAAGGAAGAACAGAAGACGCCAACAGGT 1049
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 4295, Application US/11060756; GENERAL INFORMATION:
     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.
Matches 572; Conservative
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: HOMO
US-11-060-756-4295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
US-11-060-756-4295
     572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                       514
                                                                                                                                                                        574
                                                                                                                                                                                                                                                                                                                                                718
                                                                                                                                                                                                                                                                                                                                                                                                                                                    814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               514
                                                                                                                                                                                                                                                                                                              694
                                                                                                                                                                                                                                                                                                                                                                                  754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          934
                                                                                                                                                                                                                                            634
     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 8
                                                                                                                                                                                                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                  g
                                                                                                                                                                        ò
                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                       à
                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 23, Application US/11060756
Sequence 23, Application US/11060756
GENERAL INFORMATION:
APPLICANT: Wyeth
APPLICANT: Wounts, William Martin
APPLICANT: Mounts, William Martin
APPLICANTON: Target Genes
FILE REFERENCE: AM101083 (031896-042000)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT PILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: PatentIn version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1300 AAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGC 1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1096 ACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGA 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                       1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATG 1299
                                                                                                                                                                                                                             GCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGAT 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            885
                                                                                                                                                                                           525
                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            945
                                                     405
                                                                                       915
                                                                                                                         465
                                                                                                                                                         975
                                                                                                                                                                                                                                                                                                                                                                                                    646 ACACTAGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCA 705
CATCAATCAATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCTGAGCCAGAA
                                                                         CAAATAATGATCTTACAGTGTATTCACAGAGATATATAAAACCTGAAAAATATTCTAATAACT
                                                                                                                       AAGCAAGGAATAATCAAGATTTGTGACTTTGGGGTTTGCACAAATTCTGATTCCAGGAGAT
                                                                                                                                                        916 AAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGAT
                                                                                                                                                                                             GCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGAT
                                                                                                                                                                                                                                                               ACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTG
                                                                                                                                                                                                                                                                                                                                 ACAGGCCACCTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    706 AGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------AGGAAATTAATCCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54.9%; Score 572; DB 10; Length 1400; 100.0%; Pred. No. 3.9e-110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1420 AACAGAAGACGCCAACAGGTACTTCCGCTCAAAGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1006 AACAGAAGACGCCAACAGTACTTCCGCTCAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 1 1 1 1 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-11-060-756-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-11-060-756-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1240
                                                                                                                           406
                                                                                                                                                                                             466
                                                                                                                                                                                                                             916
                                                                                                                                                                                                                                                               526
                                                                                                                                                                                                                                                                                                                                                                                                                                       1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  946
                                                     362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                     ò
                                                                                  셤
                                                                                                                         ò
                                                                                                                                                  음
                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                    ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

ò 요 ò ď ઠે a Š g ò 셤 ઠે 유 ð

```
Sequence 4294, Application US/11060756
| Sequence 4294, Application US/11060756
| Sequence 1204, Application US/11060756
| Sequence 1204, Application Sequence 1206, Application Sequen
                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 590
                                                                                                                                                                                                                                                                                                                       770
                                                                                                                   890
                                                                                                                                                                                                                      GGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGG 420
                                                                                                                                                                                                                                                                                             GTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTA 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 rccaccrecceraecercreaagrecresaarracagaaarraarcccaagacarca 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              831 GGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGG 890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                         241 TCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAATTAATCCCAAGACATCA
                                                                                                                                                                                                                                                                                                                                                                                                                              1 CACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTATGGTTCTTCAGTCGATATATGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCACCTGCCGTAGCCTCCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCAATCTTTAAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                471 CACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    531 GTATGGTTCTTCAGTCGATATATGGGCTATTGGTGTTTTTTGCAGAGGTCCTGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGCCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCAATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 54.5%; Score 567.4; DB 10; Best Local Similarity 98.4%; Pred. No. 3.2e-109; Matches 562; Conservative 9; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGACGCCAACAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 AAGACGCCAACAGGTACWKWSGCTCRWRWKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
CORGANISM: Homo sapiens
US-11-060-756-4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
US-11-060-756-4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 4294
LENGTH: 600
                                                                                                                                          301
                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                             891
                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     591
711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                           771
                                                                                                                                                                                            831
                                                                                                                                                                                                                                                                                                                                                                                                 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                              8 6
                                                                                                                                                                                          8
                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 22, Application US/11060756
GENERAL INFORMATION:
APPLICANT: Wyeth
TITLE OF INVENTION: Target Genes
TITLE OF INVENTION: Target Genes
FILE REPERENCE: AM101083 (031896-04200)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
CURRENT FILING DATE: 2005-02-18
SOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               creericaagagerecraerrigarrerrireaagagececaaarraaaagaaaageaegr 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   590
                                                                    657
                                                                                                                     693
                                                                                                                                                                     717
                                                                                                                                                                                                                      753
                                                                                                                                                                                                                                                                      777
                                                                                                                                                                                                                                                                                                                       813
                                                                                                                                                                                                                                                                                                                                                                         837
                                                                                                                                                                                                                                                                                                                                                                                                                        873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                    CTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAA
                                                                                                                                                                                                                                                 CTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAA
                                                                                                                                                                                                                                                                                                                                                  TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGAACTTCATGAAGGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTATGETTCTTCAGTCGATATAGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGA
                                                                                                                   CTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAA
                                                                                                                                                                                                                      CTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAA
                                                                                                                                                                                                                                                                                                                       TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGAGCCAGAAGACATGGAAAACTCTTGAGGAAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCTGGAGAGCTCCTACTTTGATTCTTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTTGCAGAGCTCCTGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54.5%; Score 567.4; DB 10; Length 600; 98.4%; Pred. No. 3.2e-109; Live 9; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 994 AATGAAGGAAGAAAAAGAGACGCCAACAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .018 AATGAAGGAAGAACAGAAGACGCCAACAGGT 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 98.4
Matches 562; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRGANISM: Homo sapiens US-11-060-756-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
US-11-060-756-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 22
LENGTH: 600
                                                                                                                   634
                                                                                                                                                                     658
                                                                                                                                                                                                                    694
                                                                                                                                                                                                                                                                   718
                                                                                                                                                                                                                                                                                                                     754
                                                                                                                                                                                                                                                                                                                                                                       778
                                                                                                                                                                                                                                                                                                                                                                                                                           814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
```

g Š 셤 ઠે g δ

```
APPLICANT: Wounts, William Martin
APPLICANT: Wounts, William Martin
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
FILE REPERENCE: AM101083 (031895-04200)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DAFF: 2005-02-18
NUMBER OF SEQ ID NOS: 30284
SOFTWARE: Patentin version 3.2
SEQ ID NO 1501
LENGTH: 600
               393 ATTAACCTGTTCCCAACTCCTGGAGGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTGGACCAACTITATCTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGA 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        678 CCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGC 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 918 ATTAACCIGITCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT 977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                438 GITIGCACAAATICTGAITCCAGGAGAIGCCIACACCGAIIAIGIAGCIACGAGAIGGIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATTGATTTTGCAGTTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               498 CCGAGCTCCTGAACTICTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69 CCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129 TATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             558 TATTGGTTGTGTTTTGCAGAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAAATCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----AGGAAAATTAATCCCAAGACATCAATCTTTTAAAAGTAACGGGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          738 IGGAATTACAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTT
                                                                  Length 600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAAAAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                             978 TAAAAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                            Score 368; DB lu; ,
Pred, No. 1e-67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189 reresacciarirarcreararcasacacr----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                          ; Sequence 1501, Application US/11060756 ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      35.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 480; Conservative
                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-060-756-1501
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                         US-11-060-756-1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
US-11-060-756-5772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                978
                                            ð
                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                  APPLICANT: Mounts, William Martin
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
TITLE OF INVENTION: Target Genes
FILE REPERBUCE: AMIO1083 (031896-042000)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69 CCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           558 TATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAGTGTGGCCTGGAAAATCAGA 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          618 TGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGA 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       678 CCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGC 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTAACCIGITCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT 977
                                                                                                                                           438 GITTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   222 -----AGGAAAATTAATCCCAAGACATCAATCATCTTTAAAAGTAACGGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     798 CCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 273 CCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   858 TGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      738 IGGAATTACAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 368; DB 10; Length 600;
Pred. No. 1e-67;
0; Mismatches 10; Indels 9
                                                                                                                                                                         1011 AAGACGCCAACAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                               541 AAGACGCCAACAGGTACWINSGCTCRWRWKT 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
US-11-060-756-1500
; Sequence 1500, Application US/11060756
; APPLICANT: Wyeth
; APPLICANT: Myeth
; APPLICANT: Mounts, William Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 81.9%;
Matches 480; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-11-060-756-1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 1500
LENGTH: 600
                                                                                                                                            481
                  361
                                                                               421
                                                                                                            951
                                                 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  918
                                                                     g
                                             à
                                                                                                          ò
                                                                                                                                      g
                                                                                                                                                                        ò
                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

g à g ò g ò g ò dd ò g S

```
APPLICANT: Wyeth
APPLICANT: Wounts, William Martin
APPLICANT: Wounts, William Martin
APPLICANT: Mounts, William Martin
APPLICANT: Mounts, William Martin
APPLICANTON: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
FILE REPREBLICATION NUMBER: US/11/060,756
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
SEQ ID NO 3884
LENGTH: 1175
                                                                                                                                                                                                                                                                                                                                                                  CCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC 128
                                                                                                                                                                                                                                                                                                                                            557
                                                                                                                                                                                                                                                                                                                                                                                                                             TGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGA 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                678 CCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGC 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            273 CCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGA 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             333 TGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAG 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                393 ATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT 452
                                                                                                                                                                                                                                                                                                9 GATTGATGCATTTGCAGTTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTA
                                                                                                                                                                                                                                                                                                                                            CCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT
                                                                                                                                                                                                                                                         438 GTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----AGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 368; DB 10; Length 6
Pred. No. 1e-67;
0; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33.0%; Score 343.8; DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189 TGTGGACCAACTTTATCTGATAATCAGAACACT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3884, Application US/11060756
GENERAL INFORMATION:
  NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
SEQ ID NO 5773
LENGTH: 600
                                                                                                                                                                          35.4%;
81.9%;
                                                                                                                                                                      Query Match 35.4
Best Local Similarity 81.9
Matches 480; Conservative
                                                                                       ; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-060-756-5773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo
US-11-060-756-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-11-060-756-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                                                                            498
                                                                                                                                                                                                                                                                                                                                                                                   69
                                                                                                                                                                                                                                                                                                                                                                                                                             558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 5773, Application US/11060756
GENERAL INFORMATION:
APPLICANT: Wyeth
APPLICANT: Wyeth
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
FILE REFERENCE: AMNION3 (031896-042000)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
                                                                                       Drug
                                                                                       ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  272
                                                           APPLICANT: Mounts, William Martin
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles
TITLE OF INVENTION: Target Genes
FILE REPERENCE: AM101083 (031896-042000)
CURRENT PEPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
SEQ ID NO 5.772
LENGTH: 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGA 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGAAGATCCAGATGACAG 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACGGGGTTTCGCCATGTTGA 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAG 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----AGGAAAATTAATCCCAAGACATCAATCTTTAAAAGTAACGGCTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTAACCTGTTCCCAACTCCTGGAGGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATTGATGCATTTGCAGTTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGAGCTCCTGAACTTCTTGTGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         96;
                                                                                                                                                                                                                                                                                                                                                               DB 10; Length 600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAAAAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG 498
                                                                                                                                                                                                                                                                                                                                                               Score 368; DB 10; Length 6
Pred. No. 1e-67;
0; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGGACCAACTTTATCTGATAATCAGAACACT----
Sequence 5772, Application US/11060756 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                           Query Match 35.4%;
Best Local Similarity 81.9%;
Matches 480; Conservative (
                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-060-756-5772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-11-060-756-5773
                                                                                                                                                                                                                                                                                                                                                                                                                                              438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  222
```

ò 엄 ઠે g ò 셤 ð g ò 8

ò

ò

ઠે

ò 셤 ઠે

```
Sequence 8156, Application US/11060756
GENERAL INFORMATION:
APPLICANT: Wyeth
APPLICANT: Wounts, William Martin
TITLE OF INVENTION:
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
FILE REFERENCE: AM101083 (031886-042000)
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
                                                 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                92 TGTAGAAACAGGGACACGGGTCAGATTGTGGCCATCAAGAAGTTTCTGGAATCAGAAGAT 151
                                                                                                                                                   152 GACCCTGTCATAAGAAATTGCCCTTCGGGAAATCCGAATGCTCAAGCAACTCAAGCAT 211
                                                                                                                                                                                                                                                          301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                            332 carcicgigakakakarakacrikacakakakakakakarakaririri
                                                                                                                                                                                                                                                                                                                                                                                               ATGGAGAAGTATGAAAAATTGGAAAATTGGAGAAGGATCCTATGGAGTTGTTTTCAAA 91
                                                                                                                                                                                                                                                                                                                                                                                                                              AATTGCATACATAGAGGCGTGAAGCCAGAAATATCCTCATCAGAAACATTCCGTGATT 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       512 Taccirdéciaccadgráciderécerécéricadereciderégégeadacacecadracede 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       572 CCCCCGGIGGAIGTITGGGCAATIGGCIGIGTTTGCTGAGCTGCTGTCAGGAGTGCCT 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          632 CIGIGGCCAGGAAAICGGAIGIGGAICAGCIGIAICIGAITAGGAAGACCTIGGGGGA 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91
                                                                                                                  212 cccaaccirdraaccicciggaagicricaggaggaaacgaggcircacriggigiri
                                                                                                                                                                                                                                                                                          GAATATTGTGACCACAGTTCTCCATGAGTTGGACAGATACCAAAGAGGGGTACCAGAA
                                                                                                                                                                                      CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAAGGAAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32 ATGGAGAAGTATGAAAAATTGGGAAAATTGGAGAAGGATCCTATGGAGTTGTTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTAGAAACAGGGACACGGGTCAGATTGTGGCCATCAAGAAGTTTCTGGAATCAGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         598 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10; Length 1175,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.0%; Score 343.8; DB 10; 71.2%; Pred. No. 1.2e-62; iive 0; Mismatches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 71.2*
Matches 469; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens
US-11-060-756-8156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-11-060-756-8156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 8156
                32
                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGIH
                                                                          Ор
                                               ઠ
                                                                                                                 ò
                                                                                                                                                 임
                                                                                                                                                                                                                 g
                                                                                                                                                                                    à
                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Mounts, William Martin
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
FILE REFERENCE: AM101083 (031896-042000)
CURRENT PAPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
LENGTH.: 1175
                                                                                                                      TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                 TGTAGAAAACAGGGACACGGGTCAGATTGTGGCCATCAAGAAGTTTCTGGAATCAGAAGAT 151
                                                                                                                                                                                                   180
                                                                                                                                                                                                                                     211
                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                               301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                       271
                                                                                                                                                                                                                                                                                                                                                                272 GAATÁTTGTGACCACAGTTCTCCATGAGTTGGACAGATACCAAAGAGGGGTACCAGAA 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCÍCGIGAAGAGCATAACTIGGCAGACACTGCAAGCTGIAAATTTTTGCCATAAACAC 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392 AATTGCATACATAGAGACGTGAAGCCAGAAATATCCTCATCACGAAACATTCCGTGATT 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT----CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGCTTTGTGACTTTGGATTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537
                                                                                              91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                   Arddadahdradahahartrddahahartrddadahddarccrarddagirdrrrrdah
                                                                                                                                                                                        GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                         152 GACCCTGTCATAAAGAAATTGCCCTTCGGGAAATCCGAATGCTCAAGCAACTCAAGCAT
                                                                                                                                                                                                                                                                                          212 CCCAACCTTGTTAACCTCCTGGAAGTCTTCAGGAGGAAACGGAGGCTTCACCTGGTGTTT
                                                                                                                                                                                                                                                           181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          572 céccégérgárgiriggécaarigéciéréreririgérgagérgérgagagageter
                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    э;
Э
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1175
                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 343.8; DB 10; Length
Pred. No. 1.2e-62;
0; Mismatches 187; Indels
     Pred. No. 1.2e-62;
0; Mismatches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3885, Application US/11060756 GENERAL INFORMATION:
 71.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 71.2%;
Matches 469; Conservative
                Matches 469; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-060-756-3885
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Wyeth APPLICANT: Mount
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -11-060-756-3885
                                                                                                                    61
                                                                                                                                                       92
                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                   332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 632
                                                                          g
                                                   ઠ
                                                                                                                  ò
                                                                                                                                                 원
                                                                                                                                                                                                                 d
                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

ä

원

ò g ઠે 8 8 g

ઠે g ઠ g Š 셤 ò 셤

ઠે

```
Drug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Wyeth
APPLICANT: Wyeth
APPLICANT: Woults, William Martin
APPLICANT: Woults, William Martin
TITLE OF INVENTION: Uncleic Acid Arrays for Monitoring Expression Profiles of
TITLE OF INVENTION: Target Genes
FILE REFERENCE: AM101083 (031896-042000)
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT APPLICATION DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               980 AAAGAAAAGCACGTAATGAAGGAAGAACAGAAGACGCCCAACAGGTACTTCCGCTCAAAA 1039
                                                                                                              301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                          AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                      212 CCCAACCTTGTTAACCTCCTGGAAGTCTTCAGGAGGAAACGGAGGCTTCACCTGGTGTTT 271
                                                                                                                                                                                                             CATCTCGTGAAGAGCATAACTTGGCAGACACGCAAGCTGTAAATTTTTGCCATAAACAC 391
                                                                                                                                                                                                                                                                                                   AATTGCATACATAGAGACGTGAAGCCAGAAATATCCTCATCACGAAACATTCCGTGATT 451
                                                                                                                                                                                                                                                                                                                                              AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                  AAGCTTTGTGACTTTGGATTTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC 511
                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                               572 CCCCCGGIGGAIGTTIGGGCAATTGGCTGTGTCTTTGCTGAGCTGCTGTCAGGAGTGCCT 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 ATGGCATCAGTATACCTGAGCCAGAAGACATGGAAAACTCTTGAGGAAAAGTTCTCAGATG 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGAT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CIGIGGCCAGGAAAATCGGATGTGGATCAGCTGTATCTCATTAGGAAGACCTTGGGGGA 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 GAACACTAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAGTTCTCAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          740 GAATTACAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 27.4%; Score 285.6; DB 10; Length Best Local Similarity 94.3%; Pred. No. 1.4e-50; Matches 283; Conservative 12; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 37, Application US/11060756; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens
US-11-060-756-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-11-060-756-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 37
                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            512
181
                                                                                                                            272
                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     229
                                                                                                                                                                                                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                            q
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                             8 B
                                                                                                                                                                  8 6
                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Wyeth
APPLICANT: Wounts, William Martin
APPLICANT: Wounts, William Martin
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Genes
FILE REFERENCE: AM101083 (031896-042000)
CURRENT PAPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
SOFTWARE: PatentIn version 3.2
SEQ ID NO 8157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              537
                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                  AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                            211
                                                                                                                                              271
                                                                                                                                                                                         301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                             TGCAGAAACAAAACCTCTGGACAAGTAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCTCGTGAAGAGCATAACTTGGCAGACACTGCAAGCTGTAAATTTTTGCCATAAACAC 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCTTTGTGACTTTGGATTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      512 TACGTGGCTACCAGGTGGTACCGCTCCCCTGAGCTGGTGGTGGGGGACACGCAGTACGGC 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          572 cccccedicalierriescalirescreiererriecreaecrecreaecreaecrecer 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTAGAAACAGGGACACGGGTCAGATTGTGGCCCATCAAGAAGTTTCTGGAATCAGAAGAT 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTGGCCAGGAAAATCGGATGTGGATCAGCTGTATCTGATTAGGAAGACCTTGGGGGA 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32 ATGGAGAAGTATGAAAAAATTGGGAAAAATTGGAGAAGGATGCTATGGAGTTGTTTTCAAA 91
                                          GACCCTGTCATAAAGAAAATTGCCTTTCGGGAAATCCGAATGCTCAAGCAACTCAAGCAT
                  GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                     CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                  TATGTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10; Length 1175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 343.8; DB 10; Length
Pred. No. 1.2e-62;
0; Mismatches 187; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 8157, Application US/11060756
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33.0%;
71.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 33.0 Best Local Similarity 71.2 Matches 469; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRGANISM: Homo sapiens US-11-060-756-8157
                                                                                                     181
                                                                                                                                              212
                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                         332
                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
```

g ઠે ద ઠ a

ઠ

```
US-11-060-756-38
US-11-060-756-38
Sequence 38, Application US/11060756
GENERAL INFORMATION:
APPLICANT: Wyeth
TITLE OF INVENTION: Nucleic Acid Arrays for Monitoring Expression Profiles of Drug
TITLE OF INVENTION: Target Gene8
TITLE OF INVENTION: Target Gene8
TITLE OF INVENTION: Target Gene8
TITLE OF INVENTION UNDERS.
CURRENT APPLICATION NUMBER: US/11/060,756
CURRENT FILING DATE: 2005-02-18
NUMBER OF SEQ ID NOS: 303284
289 AAAGAAAAGCACGTAATGAAGGAAGAACAGAAGACGCCAACAGRWWCWDMBGYTSVCWV 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  980 AAAGAAAAGCACGTAATGAAGGAAGAACAGAAGACGCCAACAGGTACTTCCGCTCAAAA 1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCATCCTGTGGGCTCTGAACTTCATGAAGGGGTGTGTGAAGATGAATCCAGATGACAGAT 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCATCAGTATACCTGAGCCAGAAGACATGGAAAGTCTTTGAGGAAAAGTTCTCAGATG 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               920 TAACCIGITCCCAACTCCIGGAGAGCTCCIACTITGATICITTTCAAGAGGCCCAAATTA 979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      740 GAATTACAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match

27.4%; Score 285.6; DB 10; Length 600;
Best Local Similarity 94.3%; Pred. No. 1.4e-50;
Matches 283; Conservative 12; Mismatches 5; Indels 0;
                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-060-756-38
                                                                                                                                                                                                                                                                                               SEQ ID NO 38
LENGTH: 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              860
                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

Search completed: April 22, 2005, 04:37:03 Job time : 2026.2 secs

BW336241 AGENCOURT Pan trog1 BY716459

tah80e04 BP187523

OM nucleic

Run on:

Sequence:

Searched:

```
Tel: 9798452616

Fax: 979845670

Email: david_adelson@tamu.edu.

Location/Qualifiers

1. .695

| rospatism="Bos taurus"
| mol_type="mRNA"
| /db_xref="taxon:9913"
| /tissue type="testes"
| /cissue ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CB169554 695 bp mRNA linear EST 30-JAN-2003 RUC603000752.R1 CSEQFXN20 testes Bos taurus cDNA, mRNA sequence.
                                                                                                                                                                                                                                           AW233105 fj28b10.9
BY075395 BY075395
AK090045 Mus muscu
AK045036 Mus muscu
AK050990 Mus muscu
BW352155 BW352155
AA65889 zu89f10.8
CR749116 CR749116
                                                                                                                                                                                                                                                                                                                            AK045036 Mus muscu
AK050990 Mus muscu
BW352155 BW352155
AA626859 zu89f10.8
CR749116 CR749116
AK046394 Mus muscu
AK046394 Mus muscu
CB722963 AMCNNUC:N
CK358920 AGENCOURT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543 ATGGAGAAGTATGAAAAATTAGCTAAGATTGGGGAGGCGTCTTATGGGGTTGTATTCAAA 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae; Bovinae; Bos.

1 (Dases 1 to 695)

4 delson, D. L. and Gill, C.A.
Bovine ESTS (Adelson and Gill)
Unpublished (2003)
Contact: David L. Adelson
Animal Breeding and Genetics
Texas A&M University
Animal Science Dept., TAMU-2471, College Station, TX 77843-2471,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                  BY716459 EBP187523 ECO538154 t
                                                                              BW336241
                                                                                                              CK597959
                                                                                                                                        AY412141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tch 46.2%; Score 480.6; DB 6; Length 695; al Similarity 92.8%; Pred. No. 5.4e-97; 504; Conservative 0; Mismatches 39; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALIGNMENTS
                                                                                                                                  AY412141
BY716459
BP187523
CO538154
                                                                                                                                                                                                                                                 AW233105
BY075395
AX090045
AX050990
BW352155
CR749116
AX046394
AX046394
                                                                                 BW336241
CK597959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CB732963
CK358920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CB169554.1 GI:28155681
Bos taurus (cow)
Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 504; Conserv
CB169554
221.8
213.4
213.2
212.2
212.2
212.3
210.6
210.6
210.6
210.6
210.7
210.6
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
210.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
CB169554/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                         υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     m134h09.r
AV986182
603750354
UI-CF-DU1
BP016186
AGENCOURT
OSTF177F1
um32d03.y
vc33b05.r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus no
AV960213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OST128128
BB160006A
AGENCOURT
                                                                                                                                                                                          April 21, 2005, 20:26:40 ; Search time 3325.85 Seconds (without alignments) 11914.206 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapi
BW241505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ml34h09.y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGENCOURT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGENCOURT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX304025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                  1 atggaaaagtatgaaaaatt......aggtacttccgctcaaaagt 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A1385966
AK016781 N
CK482747 AA061797
AV986182 AU986182 BU221831 BU686325 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CB315094 ACR400650 CB400506 CB400506 CG582395 CG532395 CCK472415 ACK472415 ACK472415 ACK472415 ACK23768 ACK23768 ACK23768 ACK237628 ACK2
                          GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                        - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY733578
BY752739
AI385966
AK016781
CK482747
AAO61797
AV986182
BU221831
BUG86325
BPO16186
CB315094
CB400506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BI511582
CK472415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX304025
AY383681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AY412140
BW241505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA286088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AW106692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CK237628
                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match Length DB
                                                                                                                                                                                                                                                                                                        US-10-766-691-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9b est1:

9b est2:

9b est4:

9b est4:

9b est6:

9b gs81:

9b gs81:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480.6
405
360.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3116.8
3116.8
3316.8
2298.4
2295.6
289.2
289.2
259.6
259.8
259.8
255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249.8
243.8
243.8
233.2
238.2
230.2
223.8
                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
```

0B 0B

Minimum Maximum

Database

450/0

Result ģ ö

Gaps

ö

q

g ò ద

8

g ò 셤 **Q**.

ò 용 à g ઠ 셤

à

ò

```
Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-sealected cDNAs to prepare full-length cDNA libraries for trapper sealected cDNAs to prepare full-length cDNA libraries for trapper sealected cDNAs to prepare full-length cDNA libraries for trapper sealected cDNAs to RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)

COMPUTER-Dassed methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)

CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Res. 11 (2), 281-289 (2001)

Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
      Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itohi,W., Kagawa,T., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinaqawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full.length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                       Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-ho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9216
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATCGTGTCGTTAGGAAAATAGCCCTGCGGGAAATCCGTATGCTGAAGCAGTTGAAACAC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: genome_res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P.,
Yukuda,S., Hashizume,W., Hayashida,K., Hirozane,T., Hori,F.,
Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Kawai,J., Kojima,Y.,
Kondo,S., Konno,H., Koya,S., Miyazaki,A., Mirata,M., Nakamura,M.,
Nomura,K., Numazaki,R., Ohno,M., Ohsato,N., Saito,R., Sakazume,N.
Sano,H., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami,M.,
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rissue_type="diencephalon"
/dev_stage="16 days neonate"
/clone_lib="RIKEN full-length enriched, 16 days neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prepare mouse tissues.
Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145 ATGGAAAAGTATGAAAAGCTAGCTAAGATCGGAGAAAGGGTCTTATGGCGTTGTATTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GATCCTGTTGATAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              205 recagaaacaaarcrrcregacaagragragragegarcaaaaaarrcgregaarcregaagar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 670;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 4.6e-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 405; DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="G630052E12"
                                                                                                                                                                                                                                                                                             Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nale diencephalon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38.9%;
85.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              450; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                     22354683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local
Matches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                           MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                 JOURNAL
                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18 (bases 1 to 670)

18 Okazaki Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nixaiko, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I.,

Kiyosawa, H., Yagi, K., Tomatu, Y., Hasegawa, Y., Nogami, A.,

Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C.,

Hume, D.A., Quackenbush, J., Schrimi, L.M., Kanapin, A., Matsuda, H.,

Batalov, S., Beisel, K.W., Blake, J.M., Bradt, D., Bursic, V.,

Chothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A.,

Fletcher, C.F., Forrest, A., Frazer, K.S., Gaagererland, T.,

Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S.,

Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A.,

Kavasini, I.W., Lee, Y., Lemhard, B., Lyons, P.A., Maglott, D.R.,

Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pescole, G.,

Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M.,

Sandelin, A., Schneider, C., Semple, C.A., Sectou, M., Shimada, K.,

Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, R.D., Tomita, M.,

Wells, C., Willming, L.G., Wynshaw, Boris, M., Yang, I.,

Wang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P.,

Hayatsu, N., Hirozane-Kishikawa, T., Konno, H., Nakamura, M.,

Sakazume, N., Hirozane-Kishikawa, T., Konno, H., Nakamura, M.,

Sakazume, N., Altawi, T., Nahlaki, T., Waki, K., Kawai, J., Aizawa, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 17-DEC-2002
                                    240
                                                                                                                                                                                                                                                                                                          363 CCAAATCTTGTGAACCTCATTGAGGTGTTCAGGAGAAAGGGAAAATGCATTTAGTCTTT 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                         GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243 GGAGTGATCAAAAGTGTGTTATGGCAAACACTCCAAGCTCTCAACTTCTGTCATAAACAC 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183 AATTGTATTCACAGAGATGTAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY733578

BY733578 RIKEN full-length enriched, 16 days neonate male diencephalon Mus musculus cDNA clone G630052E12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 670)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                303 GAGTACTGTGATCACACTTTTAAATGAGCTGGAAAGAAACCCAAACGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63 GTCGCTACAAGATGGTACCAGCTCCCGACCTTCTTGTGGGGGATACCCAGTATGGTTCT
                                                                                                                                                                                                                                                  CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY733578.1 GI:27146705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCA 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 TCA 1
61
                                                                                                                         121
                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
BY733578
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
```

원

ò

δ

셤

셤 ð 셤

ò

요

δ

```
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Computer based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                     Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
Adachi,J. Aizawa,K., Akimura,T., Arakawa,T., Carninci,P.,
Fukuda,S., Hashizume,W., Hayashida,K., Hirozane,T., Hori,P.,
Imotani,K., Ishii,Y., Itch,M., Kagawa,I., Kawai,J., Kojima,Y.,
Kondo,S., Konno,H., Koya,S., Miyazaki,A., Murata,M., Nakamura,M.,
Nomura,K., Numazaki,R., Ohno,M., Oheato,N., Saito,R., Sakazume,N.,
Takeda,Y., Waki,K., Watahiki,A., Muramatsu,M., and Hayashizaki,Y.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tissues were provided by Kirk W. Beisel (Boys Town National Research Hospital 555 North 30th Street Omaha, NE 68131 USA ) whose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169 ATGGAAAAGTATGAAAAGCTAGCTAAGATCGGAGAAGGGTCTTATGGCGTTGTATTCAAG 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               229 TGCAGAAACAAATCTTCTGGACAAGTAGTAGCGATCAAAAAATTCGTGGAATCTGAAGAT 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 289 GATCGTGTCGTTAGGAAAATAGCCCTGCGGAAATCCGTATGCTGAAGCAGTTGAAACAC 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    349 CCAAACCTCGTGAACCTCATTGAGGTGTTCAGAAGAAGAGAAGAAGAAGATGCTTGTTTT 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGTACTGTGATCACACGCTGTTAAACGAGCTGGAGAAAACCCAAACGGAGTTTCTGAT 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               469 GGAĞTGATTAAAAĞTGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCAC 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Normalization and subtraction of cap-trapper-selected CDNAs to prepare full-length CDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="RIKEN full-length enriched, adult inner ear"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Computational Analysis of Full-Length Mouse cDNAs Compared with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAAATCTTGTGAAACCTCATCGAGGTGTTCAGGGAAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     assistance we gratefully acknowledge.
Please visit our web site (http://genome.gsc.riken.go.jp)
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34.6%; Score 360.2; DB 6; Length 689; 82.7%; Pred. No. 4.9e-70; ive 0; Mismatches 87; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="taxon:10090"
/tissue_type="inner_ear"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prepare mouse tissues.
                                                                                                                81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 82.7
Matches 421; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Musuciules Butheria; Rodentia; Sciurognath; Muridae; Mutinae; Mus and Mammalia; Eutheria; Rodentia; Sciurognath; Muridae; Mutinae; Mus. 1 (bases 1 to 689)

1 (bases 1 to 689)

2 (bases 1 to 68)

Nikaido,I., Deato,N.; Saito,R., Suzuki,H., Yamanaka,I., Kiyosawa,H., Yaqi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,

Kiyosawa,H., Yaqi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,

Kiyosawa,H., Yaqi,K., Tomaru,Y., Hall,D.P., Bult,C.,

Ruyacherbush,J.; Schriml,L.M., Kanapin,A., Matsuda,H.,

Batalov,S., Balsel,K., W., Blake,J.A., Bradt,D., Brusic,V.,

Chothia,C., Corbani,L.E., Cousins,S., Dalla,E., Dragani,T.A.,

Fletcher,C.F., Forrest,A., Frazer,K.S., Gaasterland,T.,

Gustincich,S., Hirokawa,N., Jackson,I.J., Nonagaya,A.,

Kuvochkin,I.V., Lee,Y., Lenhard,B., Lyons,P.A., Maglott,D.R.,

Multais,L., Marchionni,L., McKenzie,L., Miki,H., Nagashima,T.,

Nummata,K., Okido,T., Pavan,W.J., Pertea,G., Pesole,G.,

Ravasi,T., Read,J.C., Reed,D.J., Ramachandran,S.,

Ravasi,T., Reed,J.C., Reed,D.J., Ramachandran,S.,

Ravasi,T., Red,J.C., Remple,C.A., Setou,M., Shimada,K.,

Sultana,R., Takenaka,Y., Taylor,M.S., Teasdale,R.D., Tomita,M.,

Verardo,R., Wagner,L., Wahlested,C., Wang,Y., Waranabe,Y.,

Wells,C., Wilming,L.G., Wynshaw-Boris,A., Yanagisawa,M., Yang,I.,

Hayatsu,N., Hirozane-Kishikawa,T., Konno,H., Nakamura,M.,

Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Alazawa,K.,

Rogers,J., Birney,E. and Hayashizaki,Y.

Rogers,J., Birney,E. and Hayashizaki,Y.

Malysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 17-DEC-2002
       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                                                                                                               GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                    AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             565 AAGATTIGIGACTTIGGATTIGCACGAATTCTAATTCCAGGAGACGCCTACACACACTAT 624
                                                                         325 CCAAACCTCGTGAACCTCATCGAGGTGTTCAGAAGAAAAGAAAAGATGCATCTAGTTTTT 384
                                                                                                                                                385 GAGTACTGTGATCACACTGTTAAACGAGCTGGAGAAAACCCAAACGGAGTTTCTGAT 444
                                                                                                                                                                                                                                                                                                                                              445 GGAGTGATTAAAAGTGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCAC 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         689 bp mRNA linear EST 17-DEC-200
BY752739 RIKEN full-length enriched, adult inner ear Mus musculus
CDNA clone F930014106 5', mRNA sequence.
BY752739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                625 GTTGCCACCAGGTGGTACCGAGCCCNCGAACTTCTCGTGGGAGACA 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATA 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY752739.1 GI:27183802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST.
                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
BY752739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
```

```
AK016781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11042159
                                        195
                                                                                                                                                                                                                             375
                                                                                                                                                                                                                                                                                       435
                                                                                                                                                                                                                                                                                                                                                   495
                                                                                                                                                                                                                                                                                                                                                                                 359
                                                                                                                                                                                                                                                                                                                                                                                                                 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
AK016781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                   ò
                                                                 q
                                                                                                                             g
                                                                                                   ઠ
                                                                                                                                                               ò
                                                                                                                                                                                           g
                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                          엄
                                                                                                                                                                                                                                                                                                                                                                                                                                     임
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. B. (bases 1 to 500)

E. (bases 1 to 500)

Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R., Waterston, R. and Wilson, R., Vancerston, R. and Wilson, R.

I. Unpublished (1999)

Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
                                                                                                                                                                                                                                   A138596 mouse testis (#937308) Mus musculus cDNA clone Innear EST 27-JAN-1999 m134109.y1 Stratagene mouse testis (#937308) Mus musculus cDNA clone INAGE:513953 5' similar to gb:X66358 SERINE/THREONINE-PROTEIN mana sequence.
   AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                      480
                                                                                 This read is a RESEQUENCE of a previously sequenced mouse clone This read has been verified (found to hit its original self in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32.0%; Score 333.6; DB 1; Length 500; 82.3%; Pred. No. 4.4e-64; ive 0; Mismatches 84; Indels 4
                                                                                                                        481 GTAGCTACGAGATGGTACCGAGCTCCTGA 509
                                                                                                                                           648 TGTGCCANCCAGTGGTACCGAGCCCCCGA 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="mRNA"
/strain="CD-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: -40RP from Gibco
High quality sequence stop: 339.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
/clone="IMAGE:513953"
                                                                                                                                                                                                                                                                                                                                           Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                              AI385966.1 GI:4199429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="males"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  correct orientation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 408; Conserva<sup>©</sup>
                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                              529
 361
                                                             121
                                                                                                                                                                                                 RESULT 4
AI385966
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                  g
                        엄
                                                          à
à
                                                                                                                      ò
```

```
AKO16781

Mus musculus adult male testis cDNA, RIKEN full-length enriched library, clone:4933411017 product:cyclin-dependent kinase-like 1 (CDC2-related kinase), full insert sequence.
                                                                                                                                                             59 CCTCATCGAGGTGTTCAGAAGAAGAAGATGCATCTAGTTTTTTGAGTACTGTGATCA 118
                                                                                                                                                                                                                                                                          374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Suni, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watchiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKBN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
CCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTTAGTTTTTGAATACTGTGATCA
                                                                                                                                                                                                                                 255 TACACTITIAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAG
                                                                                                                                                                                                                                                                                                                                                            315 CGTATTATGGCAAACACTTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                               179 TGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCACAATTGTATTCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             239 GGATGTAAAACCTGAAAACATCCTAATAACCAAGCAAGGGATGATAAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299 TGGATTTGCACGAATTCTAATTCCAGGAGACGCCTACACAGACCTATGTTGCCACCAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA wheth. Enzymol. 303, 19-44 (1999)
99270253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AK016781.1 GI:12855701
HTC, CAP trapper.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              478 ccaccircaccir 493
```

Conservative

; ;

4.

```
YVATRWYRSPELLVGDTQYGPPVDVWAIGCVFAELLSGVPLWPGKSDVDQLYLIRKTL
BOLLIPRHQOYFSMQYFSGVKIPDPEDMETLELKFPNISYSALGFLKGCLHMDPAERL
TCEQLLQHPYFDSIREVGELTRQHDKPARKTLRQSRKHLTGLQYLPQLTSSRILPALD
NKKYHCSTKRRNYHPNI"
                                                                                                                                                                                   ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CK482747 17606510 NIH MGC 235 Rattus norvegicus cDNA clone IMAGE:7110321 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        537
                                                                                                                                                                                                                                                              177 AIGGAAAAATAIGAAAAAATIGGAAAGATIGGAGAAGCICCTAIGGGIAGIAGIICAAG 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         959
                                                                                                                                                                                                                                                                                                                                                                                                                                                    297 GACCCTGTCATAAAGAAAATCGCCCTTCGAGAAATCCGCATGCTCAAGCAACTCAAGCAC 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             357 CCCAACCTGGTCAACCTCCTGGAAGTCTTCCGGAGGAAGCGGAGGCTTCACCTGGTGTTC 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         417 GAGTACTGCGACCACACGGTGCTTCACGAGCTGGATCGGTATCAGAGGGGGGGTACCAGAG 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477 CCTCTCGTGAAGAACATAACTTGGCAGACACTGCAGGCTGTAAATTTCTGCCATAAACAT 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                776
                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  537 AACTGCATACACAGAGAGACGTGAAGCCGGGAAAATATTCTCATCACCAAACAGTCAGCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCTGTAGATGTCTGGGCAATTGGCTGTGTTTTGCTGAGTTACTGTCCGGAGTGCCT
                                                                                                                                                                                                                                                                                                                    61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                              237 TGCAGAAACAGGGACACGGGTCAGATCGTGGCCATCAAGAGGTTTCTGGAAACCGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT----CCAGGAGATGCCTACACCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         597 AAGCTCTGTGACTTTGGGTTCGCACGGCTTCTCACTGGACCAGGTGACTACTACACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                          GATCCTGTTGTTAAGAAATAGCACTAAGAAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Daniela S. Gerhard, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA
                                                                                                                                       Length 1691;
                                                                                                                                  Score 331; DB 3; Length 16
Pred. No. 1.7e-63;
0; Mismatches 195; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CK482747.1 GI:40827095
                                                                                                                                     31.8%;
70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 757)
                                                                                                                                                                                 Conservative
                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 777
                                                                                                                                       Query Match
                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CK482747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                           ORIGIN
                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /procein_id="Bac25497.1"
/db_xref="G1:26382418"
/tamalate.ion="MekyerkIGKIGEGSYGVVFKCRNRDTGQ1VAIKRFLETEDDPVI
KKTALREIRMIKQLEHPNU.VNILEBVFRRREHLUVFEYCDHTVLHELDRYQRGVPEPL
VKNITWQTLQAVNFCHKHNCIHRDVKPENILIITKQSAIKLCDFGFARLLTGPGDYYTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tissue type="testis"
clone lib="RIKEN full-length enriched mouse cDNA library"
dev_serage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                               Adachi. J. Aizawa, K., Akahira, S., Akimura, T., Arai, A., Aono, H., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Haraka, Hayatseu, N., Hiramoto, K., Hiracka, T., Hori, F., Ishi, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Saito, H., Saito, R., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shibata, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Toja, T., Yamamura, T., Yasunishi, A., Yoshida, K., Yoshino, M., Muzamatsu, M. and Hayashizaki, Y., Yoshida, K., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Please visit our web site (http://genome.gsc.riken.jp/) for further
                                                                                                                                                                                                                           Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation
of 60,770 full-length cDNAs
                                                                                           the
                                                                                                                                                                                                      The FANTOM Consortium and the RIKEN Genome Exploration Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="unnamed protein product; cyclin-dependent
kinase-like 1 (CDC2-related kinase) (MGD|MGI:1918341)
                                                                                      The RIKEN Genome Exploration Research Group Phase II Team and
                                                                                                                                  Functional annotation of a full-length mouse cDNA collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="FANTOM_DB:4933411017"
/db_xref="taxon:10090"
Genome Res. 10 (11), 1757-1771 (2000)
20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         end: BamHI. Host: DH10B.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="4933411017"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                       Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                               (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            codon start=1
                                                                                                                                                                                                                                                                                            Nature 420, 563-573 (6 (bases 1 to 1691)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sex="male"
                                                                                                           FANTOM Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .1691
                                                                                                                                                                                                                                                                                                                             Adachi, J
                                              11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                               REFERENCE
AUTHORS
                                                                                                                                                       JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                     MEDLINE
                                              PUBMED
                                                                                                                                                                                                      AUTHORS
JOURNAL
                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                              TITLE
                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
```

ø

```
AA061797
ml34h09.rl Stratagene mouse testis (#937308) Mus musculus cDNA
clone IMAGE:513953 5' similar to gb:x66358 SERINE/THREONINE-PROTEIN
KINASE KKIALRE (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 938)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theişing,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                 643 CCCCCAGTAGATGTCTGGGCAATTGGGTGTTTTGCTGATTGCTGTGCTGAGTGCCT 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              135 GAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACATCCAAATCTTGTGAA 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Primer:
XR Vector;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195 CCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTTGAATACTGTGATCA 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    th LLNL; contact the further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAAATAGCCCTGCGGGAAATCCGTATGCTGAAG---TTGAAACACCCAAACCTCGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1996)
Contact: Marra M/Mouse EST Project
Washlo-HHMI Mouse EST Project
Washlo-HHMI Mouse EST Project
Washington University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Fax: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30.4%; Score 316.8; DB 1; Length 938; 82.9%; Pred. No. 2.5e-60; Live 0; Mismatches 77; Indels 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clone is available royalty-free through LLNL
IMAGE Consortium (info@image.llnl.gov) for further
MGI:307801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seg primer: -28ml3 rev1 ET from Amersham
High quality sequence stop: 442.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                   621
                                                                                                                                                                                                                                                                                                                                            CTGTGGCCAGGAAATCGAATGTG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="IMAGE:513953"
                                                                                                                                                                                                                                                                                       598 CTGTGGCCTGGAAAATCAGATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/strain="CD-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA061797.1 GI:1555606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="males"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 398; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA061797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                         g
                                                                                                                                          à
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol type="mRNA"
// Ab_xref="raxon:10116"
// Clone='IMAGE:7110321"
// Lissue type="kidney, pooled"
// Lissue type="kidney, pooled"
// Lissue type="kidney, pooled"
// Lissue type="kidney, pooled"
// Lissue type="kidney, Vector: pExpress-1; Site 1: ECORV;
Site_2: Not1; RNA obtained from pooled kidney tissue from a mix of male and female animals at 8 wk old. Tissues were snap-frozen before RNA extraction and purification
(Tri-reagent method). CDNA was primed using oligo-dr primer: 5'-pGACTYAGTYCTAGATCGCGCCC(T)25-3' and cloned into the EcoRV/Not1 sites of pExpress-1.
Size-selection >1.4kb resulted in an average insert size of 2.2 kb. This primary library is non-normalized (normalized primary library; snon-normalized constructed by Express Genomics (Frederick, MD). Note: this is a NIH_MGC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCCTGTCATAAAGAAAATCGCCCTTCGAGAAATCGCATGCTCAAGCAACTCAAGCAT 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAAAICTIGIGAACCICAICGAGGIGITCAGGAAAAAAGGAAAAIGCAITITAGITITT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   283 cccaactrcaccrcactrcrasaactriccacaaaaacacacactrcaccrastric 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343 GAGTACTGCCACCACACAGTGCTTCACGAGCTGGACAGATATCAGAGGGGGGTACCAGAG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       403 cercresigalada da da de contra d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421 AAGATTIGIGACTTCGGGTTIGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537
Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 RmlOAD? Bethesda, MD 20892
Email: cgapbe-r@mail.nih.gov
Tissue Procurement: Howard Jacobs
cDNA Library Preparation: Express Genomics
cDNA Library Preparation: Express Genomics
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
found through the I.M.A.G.E. Consortium/LLNL at:
thtps://image.lll.gov.e.column: 07
High quality sequence stop: 695.
High quality sequence stop: 695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163 TGCAGAAACAGAGACACGGGTCAGATCGTGGCCATCAAGAGGTTTCTGGAAACCGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 463 AACTGCATACACAGAGATGTGAAGCCGGAAAACATTCTCATCACCAAACACTCAGTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 757;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 30.4%; Score 316.8; DB 7; Length Best Local Similarity 70.4%; Pred. No. 2.5e-60; Matches 439; Conservative 0; Mismatches 182; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .757
/organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

g ò g ò g ð g

Db ò

ò q ò ద ò

g

ઠે 셤 8 g

8

음

ò

g

ò

용

Š

```
Gallus gallus (chicken)

Gallus gallus

Gallus gallus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Phasianinae; Gallus.

1 (Bases I to 824)

Boardman, P.E., Sanz-Ezquerro, J., Overton, I.M., Burt, D.W., Bosch, E., Fong, W.T., Tickle, C., Brown, W.R.A., Wilson, S.A. and Hubbard, S.J.

A Comprehensive Collection of Chicken cDNAs

Curr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp mRNA linear EST 25-NOV-2002
gallus cDNA clone ChEST661113 5', mRNA
                                                                                                                                                                                                                                                                                                 ATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCA 310
                                                                                                                                                                                                                                                                                                                                      301 AACGTATTGTTTGGCAAGTTCTTCAAGCTGTTCACTTTTGCCATCAGCATAATTGTATAC 360
                                       TTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACATCCAAATCTTG 190
                                                                         TGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTTGAATACTGTG 250
                                                                                                                                                                                                                               TGAACCTGATTGAAGTTTTCCGTCGAAAACGCAAATTACATCTTGTGTTCGAGTATTGTG 240
                                                                                                                                                                                                                                                                                                                                                                                                                         311 AAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTC 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        371 ACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTG 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 ATCGTGATGTAAAACCAGAGAACATATTAATCACTAAGCAAGGTGTTATCAAGTTGTGTG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   431 ACTICGGGTTTGCACAAATTCTGA---TTCCAGGAGATGCCTACACCGATTATGTAGCTA 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 ACTITIGAMITITICA AGAMITITIA ACTIGA CONCONCIANIA CACCIANO CONCONCIANO CONCONCIANO CONCONTINO CONTINO CONTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481 CTAGGTGGTACAGAGCACCTGAGCTCCTCGGCGACACTCAGTATGGCCCTCCAGTGG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 Argreredecaaraderrecerarriecedaerrerrerecedaedecarraredec 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12445392
Contact: Simon Hubbard
Department of Biomolecular Sciences
University of Manchester Institute of Science and Technology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Gallus gallus"
/mol_type="mRNA"
/strain="White Leghorn, Hisex"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9031"

/cl_one="ChEGT661113"

/tissue_type="whole embryo"

/dev stage="20-21"

/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: Simon.Hubbard@umist.ac.uk.
Location/Qualifiers
1. .824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PO Box 88, Manchester, M60 1QD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone lib="CSEQCHN04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BU221831
603750354F1 CSEQCHN04 Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence.
BU221831
BU221831.1 GI:25410266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 01612008930
Fax: 01612360409
                                                                                                   121
                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                 251
                                                                                                                                                                   191
                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BU221831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                   요
                                                                                                                                                  8
                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Urochordata, Ascidiacea, Enterogona, Phlebobranchia, Cionidae, Ciona.

1 (basea I to 59)
Satoh, N., Satou, Y., Kohara, Y. and Shin-i, T.

Expressed genes in Ciona intestinalis
Contact: Nori Satoh
Department of Zoology
CCTCATCGAGGTGTTCAGAAGAAAGAAAGAAGGATGCATCTAGTTTTTGAGTACTGTGATCA 117
                                                                                                                                                                                                                               315 CGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG 374
                                                                                                                                                                                                                                                                                                                                                                                               238 GGATGTAAAACCTGAAAACATCCTAATAACCAAGGGATGGTAAAAGATTTGTGACTT 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298 TGGATTTGCACGAGTTTCTAATTTCCAGGAGACGCCTACACACAGACTATGTTGCCACCAGGGTG 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTACCGAGCCCCCGAACTTCTCGTGGGAGACACGAAGTACGGTTCCTCTGTAGACGTGG 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGACTCGGGACAAATTGTGGCCATCAAAAATTTGTCGAGTCAGAAGATGACCCGCTGA 120
                                                                                                   314
                                                                                                                                                                                                                                                                                           178 refrectarescadaccerricadescerridae refrectares cada cada refrectares 237
                                                                                                                                                                                                                                                                                                                                                             434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATG 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71 AAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGATGATCCTGTTG 130
                                                                                                                                                            118 CACACTGTTAAACGAGCTGGAGAAACCCAAACGGAGTTTCTGATGGAGTGATTAAAAG 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGAGAAGATAGGTAAGATAGGGGAAGGATCTTATGGCATTGTGTTTTAAATGTCGGAACC 60
                                                                                                   TACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAG
                                                                                                                                                                                                                                                                                                                                                          375 AGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 ATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAATGCAGAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AV986182
AV986182 Nori Satoh unpublished cDNA library, larva Ciona intestinalis cDNA clone cilv41b18 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="larva"
/clone_lib="Nori Satoh unpublished cDNA library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29.5%; Score 306.8; DB 2; Length 70.7%; Pred. No. 4.4e-58; Live 0; Mismatches 172; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kyoto University
Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
Tel: 81-75-753-4081
Fax: 81-75-705-1113
Email: satoh@ascidian.zool.kyoto-u.ac.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Ciona intestinalis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:7719"
/clone="cilv41b18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AV986182.1 GI:19475050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ciona intestinalis
Ciona intestinalis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 29.5
Best Local Similarity 70.7
Matches 423; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .598
                                                                                                   255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AV986182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

셤

8

g

ઠે

Homo sapiens (human) Homo sapiens

ORGANISM

```
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
/note="Organ: whole embryo; Vector: pBluescript II KS(+); Site_1: BcoRI; Site_2: Not!; This normalized library was constructed from I million independent clones. CDNA synthesis was initiated using an oligo(dT) primer, using methylated C in the first strand synthesis reaction. Following this first strand reaction, double-stranded cDNA was blunted, ligated to NotI adapters, digested with ECORI, size-selected, and cloned into the NotI and ECORI compatible sites of a custom modified MCS of the PBluescript (KS+) vector. The library was normalized in 2 rounds using conditions adapted from Soares et al., PNAS (1994) 91: 9228-9232 and Bonaldo et al., Genome Research 6 reannealing hybridization was used."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 AAATTTGTGGAATCTGAAGATGATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGT 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 AAGTTCCTGGAGTCCGAGGACCCGGTGATCCGGAAGATCGCGGTGCGGGAGGTCCCGC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTTGAAGCAATTAAAACATCCAAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAA 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         220 AGGAAAATGCATTTAGTTTTTGAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280 AACCCAAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCT 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122 Argerica Agerica Archece e de conserva de conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGAAGCTGCACCTGGTCTTTGAGTACTGTGACCACACTTCTCCACGAGCTGGACAAG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242 cAccccassastrcccasacrascrastrasasacrascrascrassacrascrasacr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        340 CTIAATTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTA 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302 głgakcitrigickcaakkakakcigcarccarcdagarcraaagccagaakakarcig 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rcriacidecircircirciadriceciada de asas de asas de consenerados en reciraciones de consenerados en consenerado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ccassidatractacadactacsidescalcasses estas estas estas estas estas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTCCTGACAGGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTG 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   542 GAGCTGCTCCGGGGTGCCACTGTGGCCCGGCAGTCAGACGTGGACCAGCTGTACCTC 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40 TCTTATGGGGTTGTATTCAAATGCAGAAACAAAACCTGTGGACAAGTAGTAGTAGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        400 ATAACTAAGCAAGGAATAATCAAGATTTGTGACTTTGGGGTTTGGACAAATTCTGATT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGGGGACACGCAGTATGGCCCTCTGTGGACGTGTGGGCAATAGGCTGTGTCTTTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 298.4; DB 5; Length 824;
Pred. No. 3.3e-56;
0; Mismatches 191; Indels 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAATCAGAACACTAGTAGA 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arccedadadarredecea 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 68.7
Matches 426; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

UI-CF-DU1-adn-i-10-0-UI.sl UI-CF-DU1 Homo sapiens cDNA clone UI-CF-DU1-adn-i-10-0-UI.sl UI-CF-DU1 Homo sapiens cDNA clone UI-CF-DU1-adn-i-10-0-UI 3', mRNA sequence. BU686325.1 GI:23541120 EST.

RESULT 10 BU686325/c DEFINITION ACCESSION VERSION KEYWORDS

```
1..536

/ Organism="Homo sapiens"
// Mol-type="mina"
// Mol-type="mina"
// Mol-type="mina"
// Lype="mina"
// Lype="mina"
// Lone="UI-CF-DUI-adn-i-10-0-UI"
// Libe="UI-CF-DUI-adn-i-10-0-UI"
// Libe="UI-CF-DUI-adn-i-10-0-UI"
// Libe="UI-CF-DUI-adn-i-10-0-UI"
// Libe="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist="Dist
                                                                                                                                                                                                                                                                                                                                                                                                       University of Iowa
2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
7024 University of Iowa Med Labs, Iowa City, IA 52242, USA
7021 319 356 4866
Fax: 319 356 7171
Email: paul-mccray@uiowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
(www.openbiosystems.com) or from Open Biosystems
Seq primer: M13 FORWARD
POLYA-Yes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 536)
Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 800 AIGGCAICAGIATACCIGAGCCAGAAGACAIGGAAACTCTTGAGGAAAAGTICTCAGAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417 ATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       740 GAATTACAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trcarcristigacricidaacricardaaggggrercrigaagargaarccagargacagar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library is GGCTGTAGGC.
TAG TISSUE=Lung Epithelial Cells Tissue nos 359-368
TAG_LIB=UI-CF-DUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28.4%; Score 295.6; DB 5; 98.7%; Pred. No. 1.4e-55; ive 0; Mismatches 4;
                                                                                                                                                                                                                           Genome Res. 6 (9), 791-806 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAG SEQ=GGCTGTAGGC
                                                                                                                                                                                                                                                                                                                                          Contact: McCray, PB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                McCray Lab
                                                                                                                                                                                                                                                                     97044477
8889548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Simi
hes 298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                       JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

**5** 

Apr

Fri

ò

õ

à g ઠે g

엄 ò

ò 셤 à a ઠે 셤 à g ò g

```
31
                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                  Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         545
                                                                                           source
                                                                                                                                                                                                                                                                                                                Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
AW106692
LOCUS
DEFINITION
                                                                             FEATURES
                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      П
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                         275
480
                                                                        215
                                                                                                  540
                                                                                                                                             999
                                                                                                                                                                                                                                 382
                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                     385
                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CB400506 565 bp mRNA linear EST 15-MAY-2003
OSTF177F10_1 AD-wrmcDNA Caenorhabditis elegans cDNA, mRNA sequence.
CB400506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reboul, J., Vaglio, P., Rual, J.F., Lamesch, P., Martinez, M., Armstrong, C.M., Lil, S., Jacotch, L., Bertin, N., Janky, R., Moore, T., Endson, J.R., Harlley, J.L., Brack, M.A., Vandenhaute, J., Boulton, S., Tolas, P.P., Ptacek, J., Snyder, M. Huang, R., Chance, M.R., Lee, H., Doucette-Stamm, L., Hill, D.E. and Vidal, M. Chance, M.R., Lee, H., Grelegans ORFeome version 1.1: experimental verification of the general and resource for protecome-scale protein
                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      959
                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                          479
                                                                                                                                                                                                                                                                                                                                                                                                            GAGGAAAAGTICICAGAIGIICAICCIGIGGCICIGAACIICAIG-AAGGGGIGICIGAA 899
                                                                                                                                                                                                                                                                                                                                                                                                                               599
                                        AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATTAT
                                                               AAGATITGTGACTICGGATTGCACGAATTCTAATTCCAGGAGGATGCCTACACAGACTAT
                                                                                          GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                  dridcakcadgridrakcgadgccctrgaacrrcrrgridgdadacacgaagracdgcricc
                                                                                                                                                                                                                                                   661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                     781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                 420 AAAAGTAACCAGTTTTTCCGTGGCATCAGCATACCCGAACCTGAGGACATGGAGACTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Nematoda, Chromadorea, Rhabditida,
Rhanditoidea, Rhabditidae, Peloderinae, Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITICAAGAGGCCCAAATTAAAAGGAAAAGCACGTAATGAAGG 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITICAAGAGGACCAAATGAAAAGAAAAAGCCCGCAATGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MA 02115,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BOSTON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: Marc_Vidal@dfci.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dana Farber Cancer Institute
1 Jimmy Fund Way Smith 858, E
Tel: 617 632 5180
Fax: 617 632 5739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (2003) In press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CB400506.1 GI:30742233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Vidal M
Marc Vidal Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nat. Genet.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expression
               96
                                                                 156
                                                                                           481
                                                                                                                    216
                                                                                                                                              541
                                                                                                                                                                      276
                                                                                                                                                                                                                                                                              386
                                        421
                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                 386
                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CB400506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
             유
                                                       음
                                                                                                            g
```

```
sequence tag of Gateway entry clones. The primers used were designed on the predicted protein encoding ORF. C. elegans ORFeome cloning project : Contact david_hill@dfci.harvard.edu or POLVĀ-No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     poly(A)+
worms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271 CTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 20-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   365 AACATITICTIGACACGGAATGATCAAGIGAACTIGGAGATITICGGATITIGCTCGAATA 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="Hermaphrodite and male"
/tissue type="whole animal"
dev.stage="mixed stage"
/clone lib="Mxh-wrmcDNA"
/note="The AD-wrmcDNA library was generated with poly(A
RNA isolated from both hermaphrodite and male N2 worms
all larval stages, embryos, adults and dauers and the
subsequent generation of cDNAs by poly(A) priming. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAAGGGTCTTATGGGGTTGTATTCAAATGCAGAAACAAAACCTCTGGACAAGTAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91 GCTGTTAAAAATTTGTGGAATCTGAAGATGATCCTGTTGTTAAGAAAATAGCACTAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65 GCAATCAAAAGITITGIGGAAACTGAAGATGATCCGCATATTAAGAAATTGCGCTACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211 AGGAGAAAAAGGAAAATGCATTTAGTTTTTGAATACTGTGATCATATAAATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185 AAACGGAACCGGAAACTTCATCTCGTCTTTGAACTTTGTGATCGAACTGTACTTCACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        245 Tricia da Anticia de La Contra de La Con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGAAGGTTCATATGGAGTTGTATAAATGTAAAATAGGGATACTGGACAAATTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151 GAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAACCTCATCGAGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391 AATAITCTAATAACTAAGCAAGGAATAATCAAGAITTGTGACTICGGGTTTGCACAAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 451 CTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          485 chichedreakarıcakarakarakede ekarener ekarin ekaren ek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW106692 731 bp mRNA linear EST 20-OCT-um32d03.y1 Sugano mouse kidney mkia Mus musculus cDNA clone IMAGE:2236229 5' similar to gb:X66358 SERINE/THREONINE-PROTEIN KINASE KKIALRE (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels

    565
/organism="Caenorhabditis elegans"
/mol_type="mRNA"
/strain="N2"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tch 25.9%; Score 269.8; DB 6; al Similarity 67.6%; Pred. No. 8.4e-50; 379; Conservative 0; Mismatches 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ||| |||||| |||| ||| ||| TATGCGGAGCTGTTGACTGGC 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTGCAGAGCTCCTGACAGGC 591
```

```
EST 09-APR-1997
                                                                                                                                                                                                                                       516 GCATACACAGAGACGTGAAGCCGGAAAATATTCTCATCACCAAACAGTCAGCCATTAAGC 575
ACTGCGACCACACGGTGCTTCACGAGCTGGATCGGTATCAGAGGGGGGGTACCAGAGCCTC 455
                                                                                TGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACT 364
                                                                                                                                 456 TCGTGAAGAACATAACTTGGCAGACACTGCAGGCTGTAAATTTCTGCCATAAACATAACT 515
                                                                                                                                                                                      TITIGIGACITICGGGITIGCACAAAITCIGATIT---CCAGGAGAIGCCTACACCGAITAIG 481
                                                                                                                                                                                                                                                                                                                                          576 TCTGTGACTTTGGGGTCGCACGGCTCCTCACTGGACCANGTGACTACTACACAGACTACN 635
                                                                                                                                                                                                                                                                                                                                                                                             482 TAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGGAGATACTCAGTATGGTTCTT 541
                                                                                                                                                                                                                                                                                                                                                                                                                                              636 GTGCCCACCCGTGGTACTGCTCACCCGAGCTGCTAGTTGGAGACACGCAGTATTGGTCCC 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vc33b05.rl Barstead MPLRB1 Mus musculus cDNA clone IMAGE:776337 5' similar to gb:X66358 SERINE/THREONINE-PROTEIN KINASE KKIALRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. 1 (bases 1 to 718)
Marra, M., Hiller, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington University School of MedicineP
4444 Forest Parkway, Box 8501, St. Louis, MO 63108
444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Fax: 314 286 1810
Fmail: mouseest@watson.wustl.edu
This clone is available ropalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTAGATGTCTGGCCAATTGGCTGTGTT 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    542 CAGTCGATATATGGCTATTGGTTGTTTT 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1. 718
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 424.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
/clone="IMAGE:776337"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/strain="BALB/c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA286088.1 GI:1932198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="mixed"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGI:469193
                                                                                305
                                                                                                                                                                                      365
                                                                                                                                                                                                                                                                                          425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA286088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                      g
                                                                                                                                                                         ð
                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                           ጵ
                                                                                                                                                                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                ò
                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="adult"
/lab_host="DH10B"
/clone_lib="Sugano mouse kidney mkia"
/clone_lib="Sugano mouse kidney mkia"
/note="Organ: kidney; Vector: pWE18S-FL3; Site_1: DraIII
(CACTGTGTG); Site_2: DraIII (CACCATGTG); 1st strand cDNA
was primed with an oligo(dT) primer
was primed with an oligo(dT) primer
ligated to a DraIII adaptor [TGTTGGCCTACTGG], digested
and cloned into distinct DraII sites of the pWE18S-FL3
vector (5: site CACTGTGTG, 3: site CACATGTG)
be used to isolate the CDNA insert. Size selection was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    constructed by Dr. Sumio Sugano (University of Tokyo Institute of Medical Science). Custom primers for sequencing: 5' end primer CTTCTGCTCTAAAAGCTGCG and 3' end primer CGACCTGCAGCACAA."
                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae, Murinae; Mus. 1 (bases 1 to 731)
Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T., Miderwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Waterston, R. and Wilson, R., Jackson, Y., Cardenas, M., McCann, R., The Washlu-NoI Mouse EST Project 1999
Unpublished (1999)
Contact: Marra M/Washlu-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         156 AAATATGAAAAAATTGGAAAGATTGGAGAAGGCTCCTATGGGGTAGTGTTCAAGTGCA 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65 GAAACAAAACCTCTGGACAAGTAGTAGTGTTTAAAAAATTTGTGGAATCTGAAGATGATC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125 CTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAA 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   crercaraaagaaaarcecerregagaaarceecareercaagcaacreaagcaceeca 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185 ATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTTGAAT 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245 ACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAG 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 AAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAATGCA 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAACAGGGACACGGTCAGATCGTGGCCATCAAGAGGTTTCTGGAAACCGAAGATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                      Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
TE1: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.8%; Score 258.6; DB 2; Length 731; 66.9%; Pred. No. 2.7e-47; ative 0; Mismatches 186; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seq primer: custom primer used
High quality sequence stop: 433.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:2236229"
                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="C57BL"
     AW106692
AW106692.1 GI:6077492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 382; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGI:1006441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                             SOURCE
ORGANISM
     ACCESSION
                          VERSION
KEYWORDS
                                                                                                                                                                                 REPERENCE
                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
```

ď ò 셤 Š 셤 g ò

δ

Search completed: April 22, 2005, 01:23:04 Job time : 3334.85 secs

```
1 ATGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                    160.4
160.4
                                                                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                                                                      158.4
                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Appli
Sequence 11, Appli
Sequence 30, Appli
Sequence 4, Appli
Sequence 13, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 7, Appli
                                                                                                                          April 21, 2005, 23:37:20 ; Search time 3944.37 Seconds (without alignments) 1602.273 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                       1 atggaaaagtatgaaaaatt......aggtacttccgctcaaaagt 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published Applications NA:*

| cgn2_6/ptodata/1/pubpna/UCT_NEW PUB.seq:*
2: /cgn2_6/ptodata/1/pubpna/UCT_NEW PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_DUBCOMB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_DUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US06_DUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/US08_DUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/US08_DUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/US08_DUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US08_DUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US09_DUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US09_DUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US09_DUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US09_DUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/US09_DUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-766-691-9
US-10-766-691-3
US-10-766-691-11
US-10-766-691-5
US-10-33-314-30
US-10-26-691-5
US-10-26-691-13
US-10-36-691-13
US-09-834-496A-3
US-09-834-496A-3
                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-766-691-1
US-10-766-691-7
                                                                                                                                                                                                                                                                                                                                                                                   5633728 segs, 3035525691 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Listing first 45 summaries
                                                                                    OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                 IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                   US-10-766-691-9
1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1041
1068
945
972
1790
1678
1819
687
882
561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0
                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1041
1025
839
823
821
762.8
709
645.6
645.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Result
No.
```

```
Sequence 5, Appli
Sequence 1, Appli
Sequence 11, Appli
Sequence 112, Appl
Sequence 112, Appl
Sequence 113, Appl
Sequence 1137, Appl
Sequence 115, Appl
Sequence 1165, Appl
Sequence 117, Appl
Sequence 118, Appl
Sequence 118, Appl
Sequence 118, Appl
Sequence 1111, Appl
Sequence 115, Appl
Sequence 1155, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Taidrich, Glenn

APPLICANT: Embrowicz, Brian

APPLICANT: Sands, Arthur T.

TITLE OF INVENTION: Novel Human Kinase Proteins and

TITLE OF INVENTION: Novel Human Kinase Proteins and

TITLE OF INVENTION: Polynuclectides Encoding the Same

FILE REFERENCE: LEX-0046-0128

FILE REFERENCE: LEX-0046-01-28

PRIOR FILING DATE: 2000-09-27

PRIOR APPLICATION NUMBER: US 60/156,511

PRIOR FILING DATE: 1999-09-28

NUMBER OF SEQ ID NOS: 13

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 9

LENGTH: 1041
US-09-960-706-1079
US-10-363-616-146
US-10-363-616-146
US-10-174-794-5
US-10-174-794-5
US-10-174-794-5
US-10-174-794-3
US-10-369-022-21
US-10-757-262-107
1 US-10-969-034-4494
6 US-10-295-681-28
1 US-09-969-034-4494
6 US-10-295-681-28
1 US-09-995-306-384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 1041; DB 19; Best Local Similarity 100.0%; Pred. No. 6.6e-266; Matches 1041; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONTRICTOR OF STATE O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 9, Application US/1076691; Publication No. US20050042626A1; GENERAL INFORMATION:
                          1363
1612
1612
12944
1701
1009
1635
11635
11635
11635
11635
11635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2213
2734
1322
12213
2213
12213
1050
1050
1050
1050
1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1050
1050
1050
1050
1050
1235
1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: homo sapiens
US-10-766-691-9
                      \begin{array}{c} 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\
```

```
Query Match 98.5
Best Local Similarity 100.
Matches 1025, Conservative
                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: homo sapiens
US-10-766-691-3
                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                    120
                                                   180
                                                                  180
                                                                                   240
                                                                                                   240
                                                                                                              420
                                                                                                                                             GGAGTGATCAAAAGCGTATTATGGCAAACACTTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                       099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGATTTGTGACTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATTAT 480
                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                      1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                  GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                          61 TGCAGAAACÇAAAACCTCTGGACAAGTAGTAGTAGTAAAAAAATTTGTGGAAATCTGAAAGAT
                                              121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGAAGCAATTAAAACAT
                                                          CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAAATGCATTTAGTTTTT
                                                                                        TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                          GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                    GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     841 GAGGAAAAGTICICAGAIGIICATCCIGIGGCICIGAACTICATGAAGGGGGIGICIGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGTACTTCCGCTCAAAAGT 1041
                61
                                                                                                              241
                                                                               181
                                                                                                                                             301
                                                                                                                                                                            361
                                                                                                                                                                                                            421
                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                              g
                                             ò
                                                            g
                                                                             ò
                                                                                          g
                                                                                                             ð
                                                                                                                           셤
                                                                                                                                                           g
                                                                                                                                             ò
                                                                                                                                                                            à
                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

RESULT 2 US-10-766-691-3

120 180 240 300 360 420 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660 9 1 Arggadangrarigadangrarangrarigadanggaricrianggggrigidang 61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGTAATAAAAAATTTGTGGAATCTGTAAAGT GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTT 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT 61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG ; 0 Length 1068; 1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGG Indels ; Sequence 3, Application US/10766691; Rublication No. US20S0042626A1; GENERAL INPORMATION:
; APPLICANT: Donoho, Gregory
; APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Triedrich, Glenn
; APPLICANT: Sambrowicz, Brian
; APPLICANT: Sambrowicz, Brian
; APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same;
FILE REFERENCE: LEX-0046-USA
CURRENT PRILING DATE: 2004-01-28
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR PRILING DATE: 1999-09-28
; NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3; SEQ ID NOS: LENGTON NUMBER: PRICE MINDON NOTE CONTRIBUTION NUMBER: PRICE CATTON NUMBER: PRICE CATTON NUMBER: US/09/671,050
; SEQ ID NO 3; SEQ ID NOS: 13 Score 1025; DB 19; Pred. No. 1.2e-261; 98.5%; Scor. 100.0%; Pred. No. ... 601 601 à

Qy 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTT 24	Qy 241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGGAAACCCAAATGGAGTTGCTGAT 300	Qy 301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360	Qy 361 AACTGTATTCACAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420	QY         421         AAGAITTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT         480           IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	QY         481         GTAGCTACGAGATGGTACCCAGGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT         540           bb         481         GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT         540	OY 541 TCAGTCGATATATGGGTATTGGTTTTTGCAGAGGTCCTGACAGGCCAGCCA	OY 601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660	Qy 661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720	Db 651 650	OY 721 GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCA	Oy 781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATCTT 840	Qy 841 GAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGTGTCTGAAG 900 145 GAGGAAAGTTCTCAGATGTTCATCTGTGGCTCTGAACTTCATGAGGGGTGTCTGAAG 804	Oy         901         ATGAATCCAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT         960           IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	OY         961 TTTCAAGAGGCCCAATTAAAAGAAAAGACACGTAATGAAGAAGAAACAAAACACAAGCCCAA 1020           IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Qy         1021 CAGGTACTTCCGCTCAAAAGT 1041           Db         925 CAGGTACTTCCGCTCAAAAGT 945	RESULT 4  US-10-766-691-5 ; Sequence 5, Application US/10766691 ; Publication No. US20050042626A1 ; GENERAL INFORMATION: ; APPLICANT: Donoho, Gregory ; APPLICANT: Nehls, Michael ; APPLICANT: Friedrich, Glenn ; APPLICANT: Friedrich, Glenn ; APPLICANT: Sambrowicz, Brian ; APPLICANT: Sands, Arthur T.
661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720	721 GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCA	781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT 840 	841 GAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAGGGGTGTCTGAAG 900 	901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT 960	961 TTTCAAGAGGCCCAATTAAAAGAAAGGAGGTAATGAAGGAAG	1021 CAGGT 1025       1021 CAGGT 1025	r 3 -766-691-11	dence 11, Application US/10/66691 Tication No. US20050042626A1 RRAL INFORMATION:	LICANT: Donoho, Gregory LICANT: Turner, C. Alexander Jr.	PLICANT: Nehls, Michael PLICANT: Friedrich, Glenn PLICANT: Zambrowicz, Brian	TER OF INVENTION: Novel Human Kinase Proteins and TLE OF INVENTION: Polynucleotides Encoding the Same LE REFERENCE: LEX-0046-USA	REAL FIGURE DATE: 2004-01-28 IOR APPLICATION NUMBER: US/09/671,050 IOR FILING DATE: 2000-09-27	LOK APPLICATION NUMBER: US 60/156,511  OR FILING DATE: 1999-09-28  MBER OF SEQ ID NOS: 13  TWARE: FastSEQ for Windows Version 4.0	TU NO 11  RPE: DNA  RPE: DNA  RPE: CAN 11  RPE: CAN 11  RPE: CAN 11  RPE: CAN 11	ry Match 80.6%; Score 839; DB 19; Length 945; t Local Similarity 90.8%; Pred. No. 3e-212; these 945; Conservative 0; Mismatches 0; Indels 96; Gaps 1;	1 ATGGAAAGTATGAAAATTAGCTAAGACTGAGAAGGGTCTTATGGGGTTGTATTCAAA 60

900

960

```
781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                       841 GAGGAAAAGITICICAGAIGITCAICCIGIGGCICIGAACITICAIGAAGGGGIGICIGAAG
                                                                                                                                                                                                                               901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                0; Indels 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1790;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: INFOYER GENOMICS, INC.; YUE, Henry
APPLICANT: HAFALIA, April J.A.; GHANLA, Narinder K.
APPLICANT: HAFALIA, April J.A.; CHANLA, Narinder K.
APPLICANT: ARVIZU, Chandra S.; RAMKUNAR, Jayalaxmi
APPLICANT: ARVIZU, Chandra S.; RAMKUNAR, Jayalaxmi
APPLICANT: BAUGHN, Mariah R.; POLICKY, Catherine M.
APPLICANT: BAUGHN, Mariah R.; TRIBOULEY, Catherine M.
APPLICANT: BURRORD, Neil; LAL, Preeti G.
APPLICANT: GRESNWALD, Sara R.; TANG, Y. Tom
APPLICANT: GRESNWALD, Sara R.; TANG, Juming
APPLICANT: GRESNWALD, SOAR R. SARA R.; TANG, Juming
APPLICANT: GRESNWALD, SOAR R. SARA R.; TANG, Juming
APPLICANT: JAKCSON, Jennifer L.
TITLE FEFRENCE: PI-0162 USN
CURRENT FILING DATE: 2003-01-15
PRIOR FILING DATE: 2000-07-20
PRIOR FILING DATE: 2000-07-20
PRIOR FILING DATE: 2000-07-20
PRIOR FILING DATE: 2000-07-20
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-09-07-28
PRIOR FILING DATE: 2000-09-07-28
PRIOR FILING DATE: 2000-07-28
PRIOR FILING DATE: 2000-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 78.9%; Score 821; DB 17; Best Local Similarity 90.6%; Pred. No. 2.5e-207; Matches 927; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No: 1698381CB1
US-10-333-314-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 30, Application US/10333314 Publication No. US20030211093A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGT 929
                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
                                                                            임
                                                                                                                            ઠે
                                                                                                                                                                  g
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 TGCAGAAACAAAACCTCTGGACAAGTAGTTGGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCTCTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 GGAGTGATCAAAAGGGTATTATGGCAAACACTTCAAGGTCTTAATTTGTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 AAGAITTGIGACTTGGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACAGGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 IGGCCIGGAAAAICAGAIGIGGACCAACTITAICIGATAATCAGAACACIAGIAGAGACG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----AGGAAAATTAATCCCAAGACATCAATCATT 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ATGGAAAAAGTATGAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 TGCAGAAACAAAAACCTCTGGACAAGTAGTAGTTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421 AAGATTTGTAGCTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541 TCAGICGAIATAIGGGCIATIGGIIGITITIGCAGAGCICCIGACAGGCCAGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601 İGGCCİĞBABAİCAĞAİĞİĞĞACCAACTITAİCTĞAİAAİCAĞAĞACİ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGCCTCTCAAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
TITLE OF INVENTION: Novel Human Kinase Proteins and TITLE OF INVENTION: Polynucleotides Encoding the Sam. FILE REFERENCE: LEX-0046-USA; CURRENT APPLICATION NUMBER: US/10/766,691
CURRENT APPLICATION NUMBER: US/09/671,050
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR APPLICATION NUMBER: US 60/156,511
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FASELSEQ for Windows Version 4.0
SEQ ID NO 5
LENGTH: 972
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 79.1%; Score 823; DB 19; Best Local Similarity 90.6%; Pred. No. 5.4e-208; Matches 929; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                      ; TYPE: DNA
; ORGANISM: homo sapiens
US-10-766-691-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

g δ

ò g ઠે g

g ò

ð 용 ð 셤

g ò

9 1 AIGGAAAGTAIGAAAATTAGCTAAGACACGAGAAACGGTCTTAIGGGGTTGTAITCAAA

```
US-10-250-889-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       043 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCT 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            960
                                                                         180
                                                                                                                         240
                                                                                                                                                                          300
                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                    838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
239 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 298
                                                 358
                                                                                                                                                478
                                                                                                                                                                                                   538
                                                                                                                                                                                                                                                 598
                                                                                                                                                                                                                                                                                                    658
                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                  718
                                                                                                                                                                                                                                                                                                                                                                                                   778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     922
                                                                                                                                                                                                                                                                                                                                        983 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                      TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                          GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                       359 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACAT
                                                                                                                          CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                       GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATACAT
                                                                                                                                                                                                                                        GGAGTGATCAAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                           AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                  AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                         719 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                            redecredababarcagargredaccaacritrarcreararcagaacacr------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                            GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAG 1165
                                                                                                                                                                                                                                                                                                  599
                                                                        121
                                                                                                                                                  419
                                                                                                                                                                                                   479
                                                                                                                                                                                                                                                 539
                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1021
                         61
                                                                                                                         181
                                                                                                                                                                          241
                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                       ò
                                                                                                                         ઠ
                                                                                                                                                                         8
                                                                                                                                                                                                셤
                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
```

RESULT 6 US-10-250-889-6

310 61 TGCAGA-AACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGA 251 TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTACTGTTGAAGCAATTAAAAC 191 TGCAGATAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAAATTTGTGGAATCTGAAGA 120 TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTA-TGTTGAAGCAATTAAAAC 311 ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTT 299 ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTTCTGTCATATAC 1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: ALTUS, Christina M.; DUFOUR, Gerard E.;
APPLICANT: ALTUS, Christina M.; DUFOUR, Gerard E.;
APPLICANT: JACKSON, Jennifer L.; JONES, Adissa L.;
APPLICANT: DAKENSON, Jennifer L.; JONES, Adissa L.;
APPLICANT: HARHS, Bernard; FLORES, Vincent Z.;
APPLICANT: DAFFO, Abel; MARWAHA, Rakesh;
APPLICANT: GERSTIN, Jr.; Edward H.; PERALTA, Careyna H.;
APPLICANT: GERSTIN, Jr.; Edward H.; PERALTA, Careyna H.;
APPLICANT: DAVID, MATE H.; LEWIS, Samantha A.
TITLE OF INVAPATION: WOLECULES FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: PT-1195 USN
CURRENT FILING DATE: 2003-07-09
FRIOR APPLICATION NUMBER: US 60/261,622
PRIOR PELLING DATE: 2001-01-10
FRIOR APPLICATION NUMBER: US 60/261,865
PRIOR PELLING DATE: 2001-01-16
FRIOR PELLING DATE: 2001-01-16
FRIOR PELLING DATE: 2001-01-16
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR PELLING DATE: 2001-01-16
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,208
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/261,102
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/262,205
FRIOR APPLICATION NUMBER: US 60/ 73.3%; Score 762.8; DB 18; Length 1678; 90.0%; Pred. No. 7.1e-192; tive 0; Mismatches 2; Indels 101; NAME/KEY: misc\_feature OTHER INFORMATION: Incyte ID No: LI:058298.1:2001JAN12 Application US/10250889 No. US20040115629A1 Query Match 73.33 Best Local Similarity 90.09 Matches 925, Conservative ORGANISM: Homo sapiens 셤 ò 180

240 377 437 360 420

453

453

857 474 534

654

497

257

Gaps

```
TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                      ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 197
                                                                                                                                                                                                                                                                                      GETTCTTCAGTCGATATATGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCAG 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      678 CICCIGGCIIGGAICCAIIGCIGACACAGIGITITCACCAIGGGGCCCAGGCICAICIGA 737
                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGGAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                            118 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                            301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGGTCTTAATTTCTGTCATATAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   438 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                         CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           618 ICCTIGATIGGCTTAATAGTIGACCTICTGAATTCTTTITCTGCCAATTCAGAGATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             738 ACTICTGGCCTCAAGTGATCCTTCCACCTCGGCCTCCCAAAGTGCTGGATTGCAAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCCACCGTGCCCAGCCAGATTTTTCAAACAATAACTACTGAGAGCTCACAAGATTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   535 GGTTCTTCAGTCGATATATGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCACTGTGGCCTGGAAAATCAGATGTGCACCAACTTTATCTGATAATCAGAACACTAGTA
                                                                                                                                       Indels 306;
                                                                                                             Length 1819;
                                                                                                            Score 709; DB 19;
Pred. No. 1.5e-177;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGATTTGTGACTTCGGGTTTGCACAAATTCTG-----
               FastSEQ for Windows Version 4.0.
                                                                                                                                     0;
                                                                                                       Query Match 68.1%;
Best Local Similarity 77.0%;
Matches 1025; Conservative (
                                                    TYPE: DNA
ORGANISM: homo sapiens
US-10-766-691-13
            SOFTWARE: FastS
SEQ ID NO 13
LENGTH: 1819
                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         595
                                                                                                                                                                                   g
                                                                                                                                                                                                                                   g
                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                 <del>Q</del>
                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
550
                                                                                                      478
                                                                                                                                610
                                                                                                                                                         535
                                                                                                                                                               595
                                                                                                                                                                                                                            671 GTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGC 730
                                                                                                                                                                                                                                                        CACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAG 655
                                                                                                                                                                                                                                                                                            785
                                                                                                                                                                                                                                                                                                             656 AGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCAC 715
                                                                                                                                                                                                                                                                                                                                                                          775
                                                                                                                                                                                                                                                                                                                                                                                                    814
                                                                                                                                                                                                                                                                                                                                                                                                                               835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  895
                                                                                                                                                                                                                                                                                                                                                                                                                                                       874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTG 955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              935 TGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTTTTG 994
                                                          TCAAGAITIGIGACTICGGGITIGCACAAATICTGATTCCAGGAGAIGCCTACACGGAIT
                                                                                                              ATGTAGCTA-CGAGATGGTACCGAGCT-CCTGAACTTCTTGTGGGAGATACT-CAGTATG
                                          ATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAA
                                                                                                                                                                                                    GITCTICAGICGATAIAIGGCTAITGGITGTITITGCAGAGGICCTGACAGGCCAGC
                                                                                                                                                                                                                                                                                 CACTGRACCTTGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT----
                                                                                                                                                                                                                                                                                                                                                                                                                                      716 CTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAA
                                                                                                                                                                                                                                                                                                                                                                                                 -----AGGAAAATTAATCCCAAGACATCAATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                     TCTTTAAAAAGTAACGGGTTTTTCCATGCATCAGTATACCTGAGGCCAGAAAACATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 13, Application US/10766691
Fublication No. US20050042626A1
GENERAL INFORMATION:
APPLICANT: Donobo, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Tricerich, Glenn
APPLICANT: Friedrich, Glenn
APPLICANT: Sands, Arthur T.
TILE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Dolynucleotides Encoding the Same
TITLE OF INVENTION: Dolynucleotides Encoding the Same
TITLE OF INVENTION: DOLYNUCLER: US/09/671,050
FRIOR FILING DATE: 2004-01-28
FRIOR FILING DATE: 2000-09-27
FRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1016 GCCAACAG 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCAACAG 1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JS-10-766-691-13
                                                                  491
                                                                                            419
               431
                                         359
                                                                                                                                                  479
                                                                                                                                                                                                     536
                                                                                                                                                                                                                                                        969
                                                                                                                                                                                                                                                                                    731
                                                                                                                                                                                                                                                                                                                                                                                                                     944
                                                                                                                                                                                                                                                                                                                                       786
                                                                                                                                                                                                                                                                                                                                                                                             786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           995
              요
                                                             q
                                                                                                                   qq
                                       ò
                                                                                         ò
                                                                                                                                                                     qq
                                                                                                                                               ò
                                                                                                                                                                                                  ò
                                                                                                                                                                                                                           ď
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

ò

g 8 유

ઠ

```
ö
                                                                                                                                                                                                                                                                                                                                           900
                                                                            GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAACAT 360
                                                                                                                          AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                            AACTGTATTCACAGAGATGTAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                        481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540
                                                                                                                                                                                                                                                                                                                                                               TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCTGTTGATAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           249 GATCCTATTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       129 ATGGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189 TGCAGAAACAAAAACTTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  601 TGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAG 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09834496A

Fatent No. US20020090701A1

GENERAL INFORMATION:

APPLICANT Kapeller-Libermann

ITILE OF INVENTION: THEIR USES THEREFOR

TILLE REFERENCE: 381552000900

CURRENT APPLICATION UNMER: US/09/834,496A

CURRENT FILING DATE: 2001-04-13

FRIOR APPLICATION NUMBER: 60/196,910

PRIOR APPLICATION NUMBER: 60/196,910

PRIOR FILING DATE: 2000-04-13

NUMBER OF SEQ ID NOS: 7

SEQ ID NO 1

LINGTH: 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 882;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 62.0%; Score 645.6; DB 9; Length Best Local Similarity 99.4%; Pred. No. 7e-161; Matches 648; Conservative 0; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , NAME/KEY: CDS
; LOCATION: (129)...(815)
US-09-834-496A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-834-496A-1
                                                                                       301
                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                     301
                                                                                                                          361
                                                                                                                                                            361
                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE
                                                                                                           ò
                                                                                                                                                      임
                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                     셤
                    성음
                                                                              a
                                                                                                                                                                                  જે
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                          1337
                                                                                                                                                                                                                                                                                                                                                                                                                                  CCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTA 1097
                                                                                                                                                                              834
                                                                                                                                                                                                 1218 ATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAA 1277
                                                                                                                                                                                                                                                                                                                                                           1338 crdakdardakrccadardackdarrakccrdricccakcrccrddadacrccracrrr 1397
                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                        774
                                                                                                                                                                                                                                                     894
                                                                                                                                                                                                                                                                                                                          954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                       GAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCA
                                                                                                                                                                              ATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAA
                                                                                                                                                                                                                                                 ACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1278 ACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGAAACAAAACTCTGGACAAGTAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: KAPPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: KAPPLICANT: KAPPLICANT: KAPPLICANT: APPLICANT: APPLICANT: APPLICANTON: 14257 NOVEL PROTEIN KINASE MOLECULES AND TITLE OF INVENTION: THERE USS THEREFOR; FILE REFERENCE: 381552000900; CURRENT APPLICATION NUMBER: 05/09/834,496A; CURRENT PILING DATE: 2001-04-13; PRIOR APPLICATION NUMBER: 60/196,910; PRIOR APPLICATION NUMBER: 60/196,910; PRIOR PILING DATE: 2000-04-13; NUMBER OF SEQ ID NOS: 7; SOFTWARE: FastSEQ for Windows Version 4.0; SEQ ID NO 3; LENGTH: 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 645.6; DB 9;
Pred. No. 6.2e-161;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-834-496A-3
; Sequence 3, Application US/09834496A
; Setter No. US/0020090701A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 62.0%;
Best Local Similarity 99.4%;
Matches 648; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1015 CGCCAACAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCCAACAGGT 1468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-834-496A-3
                                                                                                        715
                                                                                                                                                                              775
                                                                                                                                                                                                                                                   835
                                                                                                                                                                                                                                                                                                                                                                                               955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                          895
                                                                  셤
                                                                                                    ઠે
                                                                                                                                     g
                                                                                                                                                                             ઠે
                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

ઠ

ò

œ

g ò 셤 ò g ò g Š g

qq à

ઠે

```
360
                                                                                                                                                                                                                                                             361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 IGCAGAAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 Arggaaaagrargaaaaarragcraagacrggagaagggrcrrarggggrrcrarrcaaa 60
                 301 GGAGTGAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                           GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                              1 ATGGAAAAATTGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 454.4; DB 19; Length 594;
Pred. No. 3.7e-110;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Donobo, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Tiedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
ITTLE OF INVENTION: Pollynuclectides Encoding the Same
ITTLE OF INVENTION: Novel Human Kinase Proteins and
ITTLE OF INVENTION: Pollynuclectides Encoding the Same
ITTLE OF INVENTION: NOVEL HUMAN KINASE
CURRENT APPLICATION NUMBER: US/09/61,050
PRIOR PRICK APPLICATION NUMBER: US/09/671,050
PRIOR PRILING DATE: 2000-09-27
PRIOR PRILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                   421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT 456
                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 7, Application US/1076691; Publication No. US20050042626A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 99.8°
Matches 455; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA
; ORGANISM: homo sapiens
US-10-766-691-7
                                                                                                                                                                                                                                                                                                                                                                                                                US-10-766-691-7
                                                                             241
                                                                                                                                                    301
                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                         ò
                                                                                                     a
                                                                                                                                              ò
                                                                                                                                                                          a
                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
360
                                                                                                           488
                                                                                                                                                420
                                                                                                                                                                                    548
                                                                                                                                                                                                              AAGAITTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATTAT 480
                                                                                                                                                                                                                                                             608
                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                 009
                                                                                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 IGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                               1 AFGGAAAAAGTAFGAAAAATFAGCTAAGACTGGAGAAAGGGTCTTAFGGGGTTGTATTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAG 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ·;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Durono, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Ariedrich, Glenn
APPLICANT: Sranbrowicz, Brian
APPLICANT: Sranbrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION NOWBER: US/09/671,050
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR APPLICATION NOWBER: US 60/156,511
PRIOR APPLICATION NOWBER: US 60/156,511
PRIOR APPLICATION NOWBER: US 60/156,511
PRIOR APPLICATION NOWBER: US 60/156,511
PRIOR APPLICATION NOWBER: US 60/156,511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
43.7%; Score 454.4; DB 19;
Best Local Similarity 99.8%; Pred. No. 3.6e-110;
Matches 455; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
US-10-766-691-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 1
LENGTH: 561
                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JS-10-766-691-1
                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                    549
                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                           609
                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                  699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            729
                                                                                                                                                                                                                                                                                                                                                                                                                                        601
```

à В ò d ò d

	RESULT 13  US-10-363-616-146  US-10-363-616-146  Sequence 146, Application US/10363616  Publication No. US20040044181A1  GENERAL INFORMATION:  APPLICANT: Hyseq, IN THEORY INVESTION:  CURRENT APPLICATION NUMBER: US/10/363,616  CURRENT APPLICATION NUMBER: US/20/363,616  CURRENT PILING DATE: 2000-09-01  PRIOR APPLICATION NUMBER: 09/654,935  PRIOR PILING DATE: 2000-09-01  NUMBER OF SEQ ID NOS: 490  SEQ ID NO 146  LENGTH: 1612  TYPE: DNA  CORANISM: Homo sapiens  FEATURE:  NORGANISM: Homo sapiens  SEATURE:  NOCATION: (463)(1539)	Query Match 33.0%; Score 343.8; DB 17; Length 1612; Best Local Similarity 71.2%; Pred. No. 1.5e-80; Matches 469; Conservative 0; Mismatches 187; Indels 3; Gaps 1;			586 GACCTGTCATAAAGAAATTGCCCTTCGGGAAATCCGAATGCTCAAGCAACTCAAGCAT 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGAAAAAGGAAATGCATTTAGTTTTT	646 CCCAACCTTGTTAACCTCCTGGAAGTCTTCAGGAGGAAACGGAGGCTTCACCTGGTGTTT  241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	301	DB 7.66 CATCTCGGGAGGGTTAGCGAGACACTGCAAACTGGAAATTTTTGCCAAAGAG 825  Qy 361 AACTGTATTCACAGAGATATAAAAACTGAAAATATTCTAATAACTAAGGAAAGAGGAAATGCCAGAAAATTCCGGAAAATTCCGGAAAATTCCGGAAAAATTCCGGAAAAATTCCGGAAAAATTCCGGAAAAAATTCCGGAAAAAAAA	421	478 TATGIAGCIACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
		<pre>// OTHER INFORMATION: Genbank Accession No. US20030134280A1 X66358 US-09-960-706-1079 Query Match Best Local Similarity 71.2%; Pred, No. 1.4e-80; US-09-960-71.2%; Pred, No. 1.4e-80;</pre>	MAGINA MARTAGGTAAGACTGGAGAAGGGTCTTATGGGGTTGTTTCAAA 60 HHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	61 TGCAGAACAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT [	121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAACAT 	181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTT 	241 GANTACTGTGATCATTATAANTGAGCTGGAAAGAAACAATGGAGTTGCTGAT 	OY 301 GGACTGATCAAAGGTATTATGGCAAACAATTCAAGCTCTAATTTCGTGATAAACAT 360  Db 517 CATCTCGTGAAGGCATAACTTGGCAGACACTGCAAGCTGTAAATTTTTGCCATAAACA 576  OY 361 AACTGTATTCACAGAGATATAAAACCTGAAAATTTTCTAATAACTAAAGCAAGGAATAATC 420	577 AATTGCATACATAGAGACGTGAAGCCAGAAAATATCCTCATCACGAAACATTCCGTGAATT A21 AAATTTGCACTTTCCGTTTTTCCACAAAATATCTTCCACAAAAATTTCCGTGAATTTCCGTGATTTCCGTGAAAATATCTAAAAATATCTAAAAATATCTAAAAAATAAAAAA	637 AAGTTTGTGACTTTGGATTTGCTCGGCTTTTTGACTGGACCGAGTGACTACTACTACAGAC

ò g à ద

```
1069 GAATATTGTGACCACACAGTTCTCCATGAGTTGGACAGATACCAAAGAGGGGTACCAGAA 1128
                                                                                                      CATCTCGTGAAGAGATAACTTGGGAGACACTGCAAGCTGTAAATTTTTGCCATAAACAC 1188
                                                                                                                                                                                                1249 AAGCTTTGTATTTGGATTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC 1308
                                                                                                                                                                                                                                                                                                                                                                                                 1309 TACGIGGCTACCAGGTGGTACCGCTCCCCTGAGCTGCTGGGGGGAACACGCAGTACGGC 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1369 cccccedicahigiridaddahirdacidiciririgcrahaddraciatadaanact 1428
                                                                  301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                   AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1429 CTGTGGCCAGGAAAATCGGATGTGGATCAGCTGTATCTGATTAGGAAGACCTTGGGGGA 1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TGCAGAAACCAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 daairrgridaccacacacircrrgardacrridgaacrrrccaaarddacradardac 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             478 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 İGTAĞGAATAAAGATAGTĞĞAAĞAİTĞİĞĞÇÇATÇAAĞAAĞITÇÇTAĞAAĞĞTĞATĞAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GATCCTGTTGABAAAAAAGACACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GACABARIGGITAAAAAAATIGCIAIGCGAGAAAICAAGITACIAAAGCAACIGAGGCAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24.2%; Score 251.8; DB 16; Length 1701; 62.9%; Pred. No. 4.4e-56; ive 0; Mismatches 237; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-174-794-5

Sequence 5, Application US/10174794

Publication No. US20030166220A1

GENERAL INFORMATION:

APPLICANT: University of Southern California

TITLE OF INVENTION: CDNA, GENOWIC, AND PREDICTED PROTEIN

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES;

FILE REPERENCES: 13761-707

CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

SEQIENCE FASESEQ for Windows Version 4.0

SEQIENCE: Application Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA
; ORGANISM: Orcytolagus cuniculus
US-10-174-794-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 62.9
Matches 407; Conservative
                                                                                                                                                                 361
                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                      쉽
                                                                                                                                                  ò
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                               .006 ccccceireareiriedecaariederiererrirecreaecreaereaedes
946 TACGTGGCTACCAGGTGGTACCGCTCCCTGAGCTGCTGGTGGGGGACACGCAGTACGGC 1005
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Endege, Wilson
APPLICANT: Endege, Wilson
APPLICANT: Monahan, John
TITLE OF INVENTION: LONGE GENES, COMPOSITIONS, KITS, AND METHODS FOR
TITLE OF INVENTION: HUMAN PROSTATE CANCER
FILE REFERENCE: MRI-0079EC.
CURRENT APPLICATION NUMBER: US/10/357,930
CURRENT FILING DATE: 2003-02-04
                                                1009 cccaaccrrerraaccrccresaacrcrrcaeaagaaacesaccrrcacresrcris 1068
                                                                                                                                             598 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAAGCAAATGGAGTTGCTGAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 829 ArdGAGAAGTATGAAAAATTGGAAAATTGGAGAAGGATCCTATGGAGTTGTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 18; Length 2944;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
33.0%; Score 343.8; DB 18; Length
Best Local Similarity 71.2%; Pred. No. 2.1e-80;
Matches 469; Conservative 0; Mismatches 187; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature
LOCATION: 1, 2, 3, 2940, 2941, 2942, 2943, 2944
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 09/785,276
PRIOR PELICATION NUMBER: 09/785,276
PRIOR FILING DATE: 2003-02-16
PRIOR FILING DATE: 2003-02-16
PRIOR PLING DATE: 2000-02-17
PRIOR PELICATION NUMBER: 60/189,862
PRIOR PELICATION NUMBER: 60/207,454
PRIOR PELICATION NUMBER: 60/201,454
PRIOR PELICATION NUMBER: 60/211,314
PRIOR PELICATION NUMBER: 60/211,314
PRIOR PELICATION NUMBER: 60/211,314
PRIOR PELICATION NUMBER: 60/219,007
PRIOR PELICATION NUMBER: 60/219,007
PRIOR PELICATION NUMBER: 60/255,281
PRIOR PELICATION NUMBER: 60/255,281
PRIOR PELING DATE: 2000-07-18
PRIOR PELING DATE: 2000-12-13
SOFTWARE: PASISEQ FOR WINGOWS VEFSION 4.0
SSOFTWARE: PASISEQ FOR WINGOWS VEFSION 4.0
                                                                                                                                                                                                                                                                                                                    Sequence 24573, Application US/10357930
Publication No. US20040259086A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-357-930-24573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
```

g ò g ð q ò g

301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTTCAAGCTCTTAATTTCTGTCATATACAT 360	301 CAAGTAGTTCAAAAGTATTTGTTTCAGAATTATAATGGAATTTGGATTTTGTCACAGTCAC 360	361 AACTGTATTCACAGAGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420	ANTATCATACATAGAGATATAAAGCCAGAGAGAATATTGGTCTCCCAGTCTGGCGTTGTC 420	AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGAT 477		TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537		TCTTCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGCCA	541 AAAGTTGTGGTGGGCCATTGGTTGTCTGGTAATGCTCATGGGGGAACCC 600	CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG 644	CHGTTTCCTGGAGACTCTGATTGATCACCTTATTATGATGAG 647
301	301	361	361	421	421	478	481	538	541	598	601
ò	qa	ò	q	È	q	È	qa	ò	đ	ò	qa

Search completed: April 22, 2005, 06:44:17 Job time : 3951.37 secs

THIS PAGE BLANK (USPTO)

```
LENGTH: 1041
                                                                                                                                                                                                                                                                                     JS-09-671-050-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-671-050-9
                                                                                                128
128
119.2
116
            134.8
133.2
133.2
133.2
133.2
133.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 13, Appl
Sequence 1, Appli
Sequence 161, Appli
Sequence 161, Appli
Sequence 5, Appli
Sequence 3, Appli
Sequence 3, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2083, Ap
Sequence 9, Appli
Sequence 9, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 13, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 114, App
Sequence 2154, Ap
Sequence 3, Appl
Sequence 115, Appl
Sequence 4802, Ap
Sequence 4276, Ap
Sequence 4206, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 9, Appli
Sequence 3, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Appli
Sequence 11, Appl
Sequence 5, Appli
                                                                      April 21, 2005, 20:27:40; Search time 197.088 Seconds (without alignments) 8642.674 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                 1 atggaaaagtatgaaaaatt.....aggtacttccgctcaaaagt 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1
Sequence 1
Sequence 1
                                                                                                                                                                                                                                                                                                                                               Issued Patents NA:*

(cgn2_6/ptodata/1/ina/5A_COMB.seq:*
(cgn2_6/ptodata/1/ina/5B_COMB.seq:*
(cgn2_6/ptodata/1/ina/6A_COMB.seq:*
(cgn2_6/ptodata/1/ina/6B_COMB.seq:*
(cgn2_6/ptodata/1/ina/RECTUS_COMB.seq:*
(cgn2_6/ptodata/1/ina/RECTUS_COMB.seq:*
(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-949-016-1681
US-09-411-628-5
US-10-174-794-5
US-10-174-794-3
US-09-911-628-3
US-09-949-016-2083
US-08-974-3-9
US-08-974-3-9
US-09-938-106-1
US-09-338-125-1
US-09-338-125-13
US-09-417-197-112
US-09-417-197-114
US-09-417-197-114
US-09-417-197-114
US-09-417-197-114
US-09-417-197-114
US-09-417-197-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-220-132-3
US-09-919-039-115
US-09-949-016-4802
US-09-949-016-4276
US-09-949-016-4906
                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-671-050-1
US-09-671-050-7
                                                                                                                                                                                                           1202784 seqs, 818138359 residues
                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                nucleic search, using sw model
                                                                                                                                                                         IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                    US-10-766-691-9
1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ouery
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343.8
251.8
251.8
251.8
251.8
241.2
163.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        154.2
154.2
151
145.8
134.8
                                                                                                                        Title:
Perfect score:
                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                160.4
                                                OM nucleic
                                                                                                                                                Sequence:
                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                   Database
                                                                        Run on:
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4325, Ap
5, Appli
                                                                                                                                                                      13423, A
4, Appli
4, Appli
1, Appli
1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                   1, Appli
37, Appl
37, Appl
37, Appl
1, Appli
                                                                                                                                Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
  Sequence 1
Sequence 3
Sequence 5
Sequence 5
Sequence 5
Sequence 5
Sequence 5
Sequence 5
                                                                                                                                                          Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                              Sequence
                                                                                                                    Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1041;
                                                                                                                                                                                                                                                                                                                                                        GENERAL INPORTOR:
APPLICANT: Donoho, Gregory
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Friedrich, Glenn
APPLICANT: Sandrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: No. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: Polymacleocides Encoding the Same
FILE REFERENCE: LEx. 0046-USA
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 1041; DB 4; Best Local Similarity 100.0%; Pred. No. 1.7e-285; Matches 1041; Conservative 0; Mismatches 0;
US-09-023-655-1373
US-09-949-016-181
US-09-620-3120-313
US-09-949-016-5854
US-08-154-915-1
US-08-164-517-37
US-08-464-517-37
US-08-46-316-3
US-09-248-796A-4323
US-09-248-796A-4325
US-09-248-796A-4325
US-09-949-016-13425
US-09-949-016-13425
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
US-09-949-016-13421
                                                                                                                                                                                                                                                                  ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                  ; Sequence 9, Application US/09671050; Patent No. 6716616
  ORGANISM: homo sapiens
```

ö

```
960
                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                              121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                        241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                   TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                           181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                      361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541 TCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                      ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                              121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                           CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                           Gaps
                                                                                                                         ;
0
                                                                                            Length 1068;
                                                                                                                         0; Indels
                                                                                         Query Match . 98.5%; Score 1025; DB 4; I
Best Local Similarity 100.0%; Pred. No. 5.9e-281;
Matches 1025; Conservative 0; Mismatches 0;
                                                 sapiens
                                ; TYPE: DNA
; ORGANISM: homo
US-09-671-050-3
SEQ ID NO 3
LENGTH: 1068
                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                   염
                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                        ð
                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                              420
                                                                                           420
                                                                                                                         480
                                                                                                                                                        480
                                                                                                                                                                                      540
                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                        099
                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                   GGAGTGATCAAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                              AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                           AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                    AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                    GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                        GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGTTCT
                                                                                                                                                                                                                                              TCAGTCGATATATGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCACTG
                                                                                                                                                                                                                                                                            rcagrocananardescrarresrrererrirreseagascreeraacasccasecre
                                                                                                                                                                                                                                                                                                           TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                           601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                   GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCCAAGACATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                            GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Durner, ILV.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nichels, Michael
APPLICANT: Sambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: No. 67166161 Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REPERBENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 2001-06-11
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/09671050
Patent No. 6716616
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-671-050-3
 301
                              301
                                                            361
                                                                                           361
                                                                                                                        421
                                                                                                                                                    421
                                                                                                                                                                                   481
                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 2
                           g
                                                            ò
                                                                                 QQ
                                                                                                                    à
                                                                                                                                                   g
                                                                                                                                                                                   ò
                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                    ⋧
                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

셤

ઢ

9

ઠે

```
960
                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                        744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                           805 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT-----
                                                                                                                                                                                                                                                                                                                               781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 5, Application US/09671050
; Fatent No. 6716616
; GREREAL INFORMATION:
; APPLICANT: Donlob, Gregory
; APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Friedrich, Glenn
; APPLICANT: Sands, Arthur T.
; TITLE OF INVENTION: Polynucleotides Encoding the Same
; TITLE OF INVENTION: Polynucleotides Encoding the Same
; FILE REFERENCE: LEX-0046-USA
; CURRENT APPLICATION NUMBER: US/09/671,050
; CURRENT FILING DATE: 2001-06-11
; FRIOR FILING DATE: 1999-09-28
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: FastSEQ for Windows Version 4.0
; LENGTH: 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79.1%; Score 823; DB 4; 90.6%; Pred. No. 1.2e-223; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021 CAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGTACTTCCGCTCAAAAGT 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 90.6
Matches 929; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-671-050-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-671-050-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                745
                          481
                                                                     541
                                                                                                                                                        601
                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                    651
                                                                                                                                                                                                                                                                                                                                                                       651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                  ద
                                                                                                                                                      ò
                                                                                                                                                                                          g
                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                   ò
                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 AACTGTATTCACAGAGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTGATCAAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 839; DB 4; Length 945;
Pred. No. 3.5e-228;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                  GENERAL INTORNATION:
APPLICANT: Donoho, Gregory
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Triedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Brian
APPLICANT: Brian
APPLICANT: Brian
APPLICATION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 6716616l
FILE REFERENCE: LEX-0046-USA
CURRENT TILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11
LENGTH: 945
                                                                                                                                                                                                                                                              Sequence 11, Application US/09671050 Patent No. 6716616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80.6%;
90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.8
Matches 945; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
CORGANISM: homo sapiens
US-09-671-050-11
                                                                                                              1021 CAGGT 1025
                                                                                                                                                      1021 CAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
```

셤 ò g ઠ g

용. 장

셤 ŝ ద

ò 名 8

ò 유 ઠ

; Patent No.; GENERAL IN.; APPLICANT ; APPLICANT ; APPLICANT ; APPLICANT ; APPLICANT ; APPLICANT ; APPLICANT ; TITLE OF ;	SOFTWARE: SEQ ID NO 1 LENGIN TYPE: DN1 TYPE: DN1 COGANISM: US-09-671-050	Query Matc Best Local Matches 10	Vy 1 Db 138	Oy 61 Db 198	Oy 121 Db 258	Oy 181	Db 318	241 Db 378	Oy 301		OY 361	Oy 421	Db 558	Oy 454	Db 618	Qy 454	Dp 678 (	Oy 454 -	Db 738 A	Oy 454 -
61 61 7 121 7 121 81 181 181 181 181 241	301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 301 GGAGTGATCAAAAGCGTATTATGGCAAACATTCAAGCTCTTAATTTCTGTCATATACAT 361 AACTGTATTCAAGAGATATAAAACCTGAAAATATTCTAATAAGCATAAAT 361 AACTGTATTCAAGAGATATAAAACCTGAAAATATTCTAATAAGCAAGGAAATAAT 361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAGCAAGGAAATAATC 361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAACTAAAGCAAAATAATCTAATAAAACTAAAACCTGAAAATATTCTAATAAACTAAAACCTGAAAATATTCTAATAAAACTAAAACCTGAAAAATATTCTAATAAAACTAAAACCTGAAAAATATTCTAATAAAACTAAAAACCTGAAAAATATTCTAATAAAACTAAAAACTTAAAAACCTGAAAAATATTCTAATAAAACTAAAAACTTAAAAACCTGAAAAATATTCTAATAAAACTAAAAACTTAAAAACCTGAAAAATATTCTAATAAAACTAAAAACTTAAAAACCTGAAAAATATTCTAATAAAACTTAAAAACCTGAAAAATATTCTAATAAAACTTAAAAACCTGAAAAATATTCTAATAAAACTTAAAAAACTTAAAAAACTTAAAAAA	421 AAGAITTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGAGTTAT 480		541 TCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGCCAGC		eui iggectiggaaaatcagatgiggaccaactititatetigataateadaacat 650 661 GGGTTTCGCCATGTTGACCAGGGTGGTCTCGAACTCTTGACGTCAARTGATCAACAACA 220	651		AAAAGTAACGGGTTTTTCCATGGCATCAGTTAATCCCAAGACATCAATCTTT	—Ü	GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG		901 AIGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTAGATTCT 960 805 AIGAATCCAGATGAACAACATAAAAAAAAAAAAAAAAAAA	TTTCAAGAGGCCCAAATTAAAAGAAAAAAAAAAAAAAAA	865 TITCAAGAGGCCCAAATTAAAAGAAAAGGTAAAGGAAGAAGAAGAAGAAGAAG	1021 CAGGT 1025	925 CAGGT 929		SULT 5 -09-671-050-13	sequence 13, Application US/09671050
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8 6 8 8	<i>ે</i> જે	B O	ζΟ QΩ	ð á	8 8	qa	\$ 6 6	ò	qa	8 8	3 8	g q	ò	QΩ	δλ	qq		RESULT US-09-6	ěs •••

1 TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGTTTAAAAAATTTGTGGAATCTGAAGAT 120 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 240 1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60 377 TCCITGAITGGCTTAATAGTTGACCTTCTGAATTCTTTTTCTGCCAATTCAGAGATTTTT 677 CTCCTGGCTTGGATCCATTGCTGACACAGTGTTTCACCATGGGGCCCAGGCTCATCTCGA 737 738 ACTICIGGCCTCAAGIGAICCTICCACCICGGCCTCCCAAAGIGCIGGAIIGCAAGIGIG 797 0; Indels 306; Gaps It No. 6716616

"AL INFORMATION:
"ICANT: Donoho, Gregory
"ICANT: Turner, Alexander Jr.
"ICANT: Turner, Alexander Jr.
"ICANT: Turner, Michael
"ICANT: Friedrich, Glenn
"ICANT: Sands, Arthur T.
"E OF INVENTION: No. 6716616el Human Kinase Proteins and E OF INVENTION: No. 6716616el Human Kinase Proteins and ENT APPLICATION NUMBER: US/09/671,050
"ENT APPLICATION NUMBER: US/09/671,050
"ENT APPLICATION NUMBER: US 60/156,511
"R FILING DATE: 1999-09-28
"WARE: FESTEQ ID NOS: 13
"WARE: FESTEQ for Windows Version 4.0 th 68.1%; Score 709; DB 4; Length 1819; Similarity 77.0%; Pred. No. 4e-191; Conservative 0; Mismatches 0; Indels 300 NA IM: homo sapiens 150-13 454 -----1819 g ò

.---- 453

ö

9

300

```
61 TGCAGAAACAAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                            61 TGCAGAAACAAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                       121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                               121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGCTCTTATGGGTTGTATTCAAA
                                                                                                                             1 Arggaaaagrargaaaarraacraagacragagaaaaggrcrrarggggrrrargraaa
                                                                                                                                                                                                                                                                                                                                                               181 CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                          181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                               Gaps
                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43.7%; Score 454.4; DB 4; Length 594; 99.8%; Pred. No. 4.2e-119; ive 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Nehls, Michael
APPLICANT: Eriedrich, Glenn
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: No. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: No. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 8040-106-11
CURRENT APPLICATION NUMBER: US,09/671,050
CURRENT FILING DATE: 2001-06-11
PRIOR FILING DATE: 1999-09-28
      Length 561;
                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421 AAGATTTGTGACTTCGGGTTTGCACAATTCTGAGT 456
  Score 454.4; DB 4;
Pred. No. 4.1e-119;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7
LENGTH: 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/09671050
Patent No. 6716616
    43.7%;
Query Match
Best Local Similarity 99.8
Matches 455; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 43.7
Best Local Similarity 99.8
Matches 455; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JS-09-671-050-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-671-050-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IYPE: DNA
                                                                                                                         a
                                                                                                                                                                       ઠે
                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                            日
                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                      978 GGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAG 1037
                                                                                                                                                                                                                                                                                                                                                                                                      278 ACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGGCTCTGAACTTCATGAAGGGGTGT 1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .038 CCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTA 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   774
                                                                                                                                                                                                                594
                                                                                                                                                                                                                                                                                                654
                                                                                                                                                                                                                                                                                                                                                                                   714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        954
      857
                                                                                         917
                                                                                                                             534
    798 AGCCACCGTGCCCAGCCAGATTTTTCAAACAATAACTACTGAGAGCTCACAAGATTGTTT
                                                                                                                             475 GATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTAT
                                                                                                                                                   918 GATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTAT
                                                                                                                                                                                                                GGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAG
                                                                                                                                                                                                                                                                                                CCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     775 ATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAA
                                                                   895 CTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Nehls, Michael
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: No. 6716616e1 Human Kinase Proteins
TITLE OF INVENTION: Polynucleotides Encoding the Same
PILE REPERENCE: LEX-0046-USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/671,050 CURRENT FILING DATE: 2001-06-11 PRIOR PILING DATE: 1001-06-11 PRIOR FILING DATE: 1999-09-28 NUMBER OF SEQ ID NOS: 13 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09671050 Patent No. 6716616 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1015 CGCCAACAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
COGANISM: homo sapiens
US-09-671-050-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1458 CGCCAACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
US-09-671-050-1
                                                                                                                                                                                                                535
                                                                                                                                                                                                                                                                                                595
                                                                                                                                                                                                                                                                                                                                                                                   655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     715
                                                                                                                           8
                                                                                                                                                                  셤
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

ဖ

```
301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
              332 carcrcgrgaaggaráagarriggcagacacacaaggrgaagrirrrigccaraaacac 391
                                                                                                                      TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537
                                                                                                                                                                                      IGCACAAATICTGATI----CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                               598 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGA 656
                                                                                                                                                                                                                                                                                                                                                                              121 GACAAAATGGTTAAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGGAACTGAGGGAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGGAAACCCAAATGGAGTTGCTGAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 GAATTGTTGACCACACATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGAGAG 300
                                                                                                                                                                                                                                                                                                                        572 CCCCCGGIGGAIGITTGGGCAAITGGCIGIGTTTTGCTGAGGCTGCTGTCAGGAGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAGGAGCTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 İGTAĞGAATAABATAGİĞAAGAATTGİGĞCCAİCAAGAAĞİTCCİAĞAAGTĞATĞAĞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3;
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
US-09-411-628-5
i Sequence 5, Application US/09411628
i Sequence 5, Application US/09411628
i Sequence 5, Application US/09411628
i Server No. 6428994
i GRNERAL INFORMATION:
i APPLICANT: UNIVERSITION:
i TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED RINASES
i FILE REFERENCE: 13761-707
i CURRENT APPLICATION NUMBER: US/09/411,628
i GRALIER APPLICATION NUMBER: US 60/102,906
i BARLIER PILLING DATE: 1999-10-02
i NUMBER OF SEQ ID NOS: 16
i SOFTWARE: FARLSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 24.2%; Score 251.8; DB 3; Best Local Similarity 62.9%; Pred. No. 2.4e-61; Matches 407; Conservative 0; Mismatches 237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: DNA
; ORGANISM: Orcytolagus cuniculus
US-09-411-628-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 5
                                                                                                                                                                                 421
                                                                                                                                                                                                                                          478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                       유
                                                          à
                                                                                                                  ð
                                                                                                                                              g
                                                                                                                                                                              à
                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1681, Application US/09949016
Fatent No. 6812339
Fatent No. 6812339
Fatent No. 6812339
Fatent No. 6812339
Fatent No. 6812339
Fatent No. 6812339
Fatent No. 6812339
FAPLICANT NEWATION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: 60/241,755
FRIOR PELING DATE: 2000-10-20
FRIOR APPLICATION NUMBER: 60/241,755
FRIOR PELING DATE: 2000-10-03
FRIOR APPLICATION NUMBER: 60/231,498
FRIOR PILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: Faster For Windows Version 4.0
SEQ ID NO 1661
LENGTH: 1177
TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                              300
                                                 240
                                                                                                                                                                      360
                                                                                                                                                                                                                               AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                      61 TGCAGAAACAAAACTTGGACAAGTAGTTGTTAAAAATTTGTGAAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GATCCTGTTAAGAAAATAGCACTAAGAAATACGTATGTTGAAGGAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                        GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152 GACCTGTCATAAAGAAAATTGCCCTTCGGGAAATCCGAATGCTCAAGGAACTCAAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT 456
                                                                                                                                                                                                                                                                                                                                               Query Match
33.0%; Score 343.8; DB 4;
Best Local Similarity 71.2%; Pred. No. 1.5e.87;
Matches 469; Conservative 0; Mismatches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ) ORGANISM: Human
US-09-949-016-1681
                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
US-09-949-016-1681
                              121
                                                                                                                                                                                                                                                                     361
                                                                                       181
                                                                                                                                                 241
                                                                                                                                                                              241
                                                                                                                                                                                                            301
                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 212
                          ò
                                                    g
                                                                                   ð
                                                                                                          요
                                                                                                                                              8 8 8
                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
```

9

Gaps

셤

ઠે

셤

ò 셤 δ g ò 요 ò

ઠે

```
61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                        301 CAAGTAGTTCAAAAGTATTTGTTTCAGATTATTAATGGAATTGGATTTTGTCACAGTCAC 360
                                                                      AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                               AATATCATACATAGAGATATAAAGCCAGAGAATATATTGGTCTCCCAGTCTGGCGTTGTC 420
                                                                                                                                                                  477
                                                                                                                                                                                                           421 AAGTTATGTGATTTTGGATTTTGCACGACACTGGCAGCTCCCGGAGAGGTTTACACTGAT 480
                                                                                                                                                                                                                                                                                                                                                      ATGGAAAAATATGAGAACCTTGGATTGGTTGGAGGAGGTTATGGAATGGTGATGAAG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     309 TGTAGGAATAAAGATAGTGGAAGAATTGTGGCCATCAAGAAGTTCCTAGAAAGTGATGAT 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369 GACAAAATGGTTAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGGAACTGAGGCAT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAATTTGTTGACCACACGATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGATGAC 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACCGAT
                                                                                                                                                                                                                                                            TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAAAGGAAAATGCATTTAGTTTTT
_
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 3080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTTTCCTGGAGACTCTGATATTGATCAGCTTTATCTTATTATGAG 647
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24.2%; Score 251.8; DB 3; Length 62.9%; Pred. No. 3.2e-61; ive 0; Mismatches 237; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: University of Southern California

TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN

TITLE OF INVENTION: SQUENCES OF LEARNING-INDUCED KINASES

FILE REFERENCE: 13761-707

CURRENT APPLICATION NUMBER: US 60/411,628

CURRENT FILING DATE: 1999-10-01

EARLIER APPLICATION NUMBER: US 60/102,906

EARLIER FILING DATE: 1998-10-02

NUMBER OF SEQ ID NOS: 16

SOFTWARE: FREISEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/09411628
Patent No. 6428994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Orcytolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 407; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: CDS
LOCATION: (249)...(1949)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 3
LENGTH: 3080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-411-628-3
                                                                                                                    361
                                                                      361
                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              249
                                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                   ઠે
                                                                                                        셤
                                                                                                                                                           ò
                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                        477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                            420
                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                              301 CAAGTAGTTCAAAAGTATTTGTTTCAGATTATTAATGGAATTGGATTTGTCACAGTCAC 360
                                                                                                                                     361 AATATCATACATAGAGATATAAAGCCAGAGAATATATTGGTCTCCCAGTCTGGCGTTGTC 420
                                                                                                                                                                                                                                                                                  478 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT 537
                                                                                                                                                                                                                                                                                                                                                                            541 AAAGCTGTGGATGTGGGCCATTGGTTGTCTGGTAACTGAAATGCTCATGGGGGAACCC 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATTTGTTGACCACACGATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGATGAC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
  GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                            AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ATGGAAAAATATGAGAACCTTGGATTGGTGAGAAGGGAGTTATGGAATGGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     reraggaaraaagaragaagaarreregecarcaagaagreeragaagrearear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GACAAAATGGTTAAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGCAACTGAGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTTTCCTGGAGACTCTGATATTGATCAGCTTTATCTTATGAG 647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/10174794

Patent No. 6664086

GENERAL INFORMATION:
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT APPLICATION NUMBER: US/09/411,628

PRIOR PLING DATE: 1999-10-01

PRIOR PLING DATE: 1999-10-01

PRIOR PLING DATE: 1999-10-01

PRIOR PRIDR OF SEQ ID NOS: 16

NUMBER OF SEQ ID NOS: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches 237; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 24.2%; Score 251.8; DB 4; Best Local Similarity 62.9%; Pred. No. 2.4e-61; Matches 407; Conservative 0; Mismatches 237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Orcytolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-174-794-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-174-794-5
                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 5
```

g

ò 요 ò සු ઠે 셤 ð

ઠ 셤 Š α

g &

à

g

g ò

ò g ò g

```
301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   598 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 241.2; DB 4;
Pred. No. 2.5e-58;
0; Mismatches 243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 23.2%;
Best Local Similarity 61.9%;
Matches 400; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
US-09-949-016-2083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-2083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 2083
LENGTH: 1794
                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                            Пp
                                                                                                                       ò
                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                   AATATCATACATAGAGATATATAAAGGCCAGAGAATATATTAGTCTCCCAGTCTGGCGTTGTC 668
477
                                                                                                                                                                                                     728
                                                                                                                                                                                                                                              537
                                                                                                                                                                                                                                                                                   788
                                                                                                                                                                                                                                                                                                                                                  789 AAAGCTGTGGATGTGGGCCATTGGTTGTCTGGTAACTGAAATGCTCATGGGGGAACCC 848
                                                                                                                                                                                                                                                                                                           61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  309 İGTAĞGAATAAAĞATAĞIĞĞA ÇAATTĞIĞĞCCAİCAĞAĞAĞITCCİAĞAAAGTĞATĞAT 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATCCTGTTGAAAAAAAAGACACTAAGAGAAATACGTATGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gacaaaarggriaaaaaaaarrgcrargggagaarrcaagrracraaaggaacra 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            489 GAATTTGTTGACGACGATTCTTGATGACTTGGAACTCTTTCCAATGGACTAGATGAC
                                                              421 AAGATITGIGACTICGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACGAT
                                                                                                                                                                                      AAGTTATGTGATTTTGGATTTGCACGACACTTGGGCAGCTCCCGGAGAGGTTTACACTGAT
                                                                                                                                                                                                                             TATGTAGGAGGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAAATTAGCTAAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.2%; Score 251.8; DB 4; Length 3080; 62.9%; Pred. No. 3.2e-61; ive 0; Mismatches 237; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                           598 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG 644
                                                                                                                                                                                                                                                                                                                                                                                                                                849 CIGITICCIGGAGACICIGAIATIGAICAGCITTAICITAITAIGAG 895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INC. 0904100.

APPLICANT: University of Southern California
APPLICANT: University of Southern California
TITLE OF INVENTION: EDWA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/10/174,794
CURRENT FILING DATE: 2002-06-18
PRIOR APPLICATION NUMBER: US 60/411,628
PRIOR PILING DATE: 1999-10-01
PRIOR APPLICATION NUMBER: US 60/102,906
PRIOR PILICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR APPLICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION NUMBER: US 60/102,906
PRIOR PELICATION DATE: 1999-10-02
SOUTH NOS: 16
PELICATION DATE: 1999-10-02
SEQ ID NOS: 16
PELICATION DATE: 1999-10-02
PELICATION DATE: 1999-10-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/10174794
Patent No. 6664086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Orcytolagus cuniculus FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 62.9
Matches 407; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (249) ... (1949)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: CDS
; LOCATION: (24)
US-10-174-794-3
                                                                 361
                                                                                                                                                                                      699
                                                                                                                                                                                                                               478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
```

g à d ò d ò g ò

```
Sequence 2083, Application US/09949016
Patent No. G812339
GENERAL INFORMATION:
FILENDAL INFORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-0-0-03
PRIOR PILING DATE: 2000-0-0-03
PRIOR PILING DATE: 2000-0-0-03
PRIOR PILING DATE: 2000-0-0-03
PRIOR PILING DATE: 2000-0-0-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FEBESEQ for Windows Version 4.0
549 caadtagircaaaagaaritgiricagarrattaarggaatiggatirigicacagicac 608
                                                                                                                                   609 AATATCATACATAGAGATATAAAGCCAGAGAATATATTGGTCTCCCAGTCTGGCGTTGTC 668
                                                                                                                                                                                                                                                         AAGAITIGIGACTICGGGTITGCACAAAITCTG---ATTCCAGGAGAIGCCIACACAT 477
                                                                                                                                                                                                                                                                                                                                                                                                           789 AAAGCTGTGGATGTGGGCCATTGGTTGTCTGGTAACTGAAATGCTCATGGGGGAACCC 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       376 AİGGAAAAAİAİGAAAACCİGGGİTTGGTİGGAGAAĞGGAGİTAİĞGAAİGĞİGAİGAAG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTAATGGGGTTGTATTCAAA 60
                                                                     AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338 TCTTCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATCCTGTTGAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        436 TGTAGGAATAAAGATACTGGAAGAATTGTGCGCCATAAAGAAGTTCTTAGAAAGTGACGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   496 GACAAAATGGTTAAAAAGATTGCAATGCGAGAAATCAAGTTACTAAAGCAACTTAGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              556 gadaderriogricharierriogaagricheraadaaaaaaagargeraceraarerri
```

```
; OTHER INFORMATION:
US-08-874-347-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 652 G 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-093-522-9
                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY:
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                        d
                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                          Š
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                              735
                                                                                           420
                                                                                                                           795
                                                                                                                                                          477
                                                                                                                                                                                         855
                                                                                                                                                                                                                        537
                                                                                                                                                                                                                                                      915
                                                                                                                                                                                                                                                                                     597
GAATTTGTTGACCACACAATTCTTGATGACTTGGAGCTCTTTCCAAATGGACTAGACTAC 675
                                                                                                                                                                                                                                                                                                                  916 AAGGCTGTTGATGTGTGGGCCATTGGTTGTCTGGTAACTGAAATGTTCATGGGGGAACCC 975
                                                                                                            301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                            676 CAAGTAGTTCAAAAGTATTTGTTTCAGATTATTAATGGAATTGGATTTTGTCACAGTCAC
                                                                                           361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAATAATC
                                                                                                                                                          AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACCGAT
                                                                                                                                                                                       TATGTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                      rarierescaacccearesracasacriccasaacrarresrresrearereareraser
                                                                                                                                                                                                                                                                                     CTATTTCCTGGAGATTCTGATATTGATCAGCTATATCATATTATGA 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Linger, Andrew H.
APPLICANT: Leof, Edward B.
APPLICANT: Leof, Edward B.
APPLICANT: Thomas, Charles F.
APPLICANT: Thomas, Charles F.
APPLICANT: Gustafson, Michael P.
TITLE OF INVENTION: CARINII
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C., P.A.
STREET: 60 South Sixth Street, Suite 3300
CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                   CTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/874,347
FILLING DATE: 13-JUN-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07039/055001
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 9, Application US/08874347 Patent No. 5863741 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Ellinger, Mark S. REGISTRATION NUMBER: 34,812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 0
TELECOMMUNICATION INFORMATION
TELEPHONE: 612-335-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coding Sequence 1...900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 903 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 612-288-9696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-874-347-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                          421
                                                                                                                                                                                      964
                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                      926
                                                                                                                                                                                                                                                                                                                                                   598
                                                                                          ò
                                                                                                                       셤
                                                                                                                                                          ઠે
                                                                                                                                                                                      8
                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                    셤
                               ŝ
                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
7
                                                                                                                                                                                                                                                                                                          61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                     61 GCAAAGGATCTTGAAAGTGGTACAATTGTAGCTCTTAAGAAAATCCGATTAGAAGCAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GATGAGGAGTTCCTAGTACAGCAATTCGTGAGATATCACTTTTGAAAGAGAGATGCACAAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 GATÄÄTGTTGTAÄGACTTTTGAÄTATAATTCAFCAAGÄGTCACGTTTATATCTTGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 GGTGCAGAAATGATTAAAAAGTTTATGTCACAACTTGTATCAGGTGTTAAATATTGTCAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361 TCTCATCGTATTCTTCATCGTGACTTGAAACCACAAAATCTTCTTATAGATCGAGAAGGA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        415 ATAATCAAGATTTGTGACTTCGGGTTTGCACAA---TTCTGATTCCAGGAGATGCCTAC 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                472 ACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAG 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 ACTCATGAAGTTGTTACACTTTGGTATCGTGCTCCAGAAGTTCTTTTAGGTGGTCGACAA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541 TATGCAACAGCGCTTGATATATGCAGCATTGGATGTATTTTTTGCAGAAATGGCTACAAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601 AAGCCATTATTTCCAGGTGATTCTGAAATTGATGAATATTTAGAATATTTAGAATATTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 GAATTTCTTGATCTTGATTTAAAAAGTATATGAATAGTATTCCAAAGGACATGATGCTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATGGTTCTTCAGTCGATATATGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGC 591
                                                                                                                                                                                                                          1 ATGCAGCAATATCAGAGGTTAGAGATTGCAGAAGGAACTTATGCAGTTGTTTATAAA 60
                                                                                                                                                       1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295 GCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         355 ATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTA
                                                                           Gaps
                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 9, Application US/09093522
| Patent No. 6015700
| GENERAL INFORMATION:
| APPLICANT: Limper, Andrew H. APPLICANT: Limper, Andrew H. APPLICANT: Limper, Andrew H. APPLICANT: Thomas, Charles F. APPLICANT: Thomas, Charles F. TITLE OF INVENTION: CDC2 PROTEIN KINASE FROM PNEUMOCYSTIS TITLE OF INVENTION: CARINII NUMBER OF SEQUENCES: 26
| CORRESPONDENCE ADDRESS: ADDRESS: ADDRESS: Fish & Richardson P.C., P.A. STREET: 60 South Sixth Street, Suite 3300
Length 903;
                                                                           Indels
Score 163.8; DB 2;
Pred. No. 1.6e-36;
0; Mismatches 287;
Query Match
Best Local Similarity 55.2%;
Matches 365; Conservative
```

```
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GCAAAGGATCTTGAAAGTGGTACAATTGTAGCTCTTAAGAAATCCGATTAGAAGCAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 GATAATGTTGTAAGACTTTTGAATATAATTCATCAAGAGTCACGTTTATATCTTGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 GAATITCTIGAICTIGATTIAAAAAGTATAIGAATAGTATTCCAAAGGACATGATGCTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCAT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 GGTGCAGAAATGATTAAAAAGTTTTATGTCACAACTTGTATCAGGTGTTAAAATATTGTCAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 rerearcerarierrearcardaerreaaaceacaaaarerrerraragareaaaaga 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 AATCTTAAATTAGCAGATTTTGGGCCTTGCAAGGGCGTTTGGTGTTCCATTGCGTGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415 ATAATCAAGATTTGTGACTTTGGGGTTTGCACAAA---TTCTGATTCCAGGAGATGCCTAC 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAG 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGGAGCAATATCAGAGGTTAGAGAAGATTGGAGAAGGAACTTATGGAGTTGTTTATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GATGAGGAGTTCCTAGTACAGCAATTCGTGAGATATCACTTTTGAAAGGATGCACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 GAATACTGTGATCATTATTAAATGAGCTGGAAAGAAACCCCAAATG-----GAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355 ATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15.7%; Score 163.8; DB 3; 55.2%; Pred. No. 1.6e-36; tive 0; Mismatches 287;
                            MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
SURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,522
FILING DATE: US-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 08/874,347
FILING DATE: 13-JUN-1997
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                07039/055002
                                                                                                                                                                                                                                                                                                                                                                   NAME: Ellinger, Mark S.
REGISTRATION NUMBER: 34,812
REFERENCE/DOCKET NUMBER: 0703
TELECOMMULICATION INFORMATION:
TELEPHONE: 612-235-5070
TELEFAX: 612-288-9696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; NAME/KEY: Coding Sequence
; LCCATION: 1...900
; OTHER INFORMATION:
US-09-093-522-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 9
SEQUENCE CHARACTERISTICS:
LENGTH: 901 base pairs
LYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match . 15.7
Best Local Similarity 55.2
Matches 365; Conservative
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      472
```

```
GenCore version 5.1.6
```

	Copyright (c) 1993 - 2005 Compugen Ltd.
OM nucleic - nu	OM nucleic - nucleic search, using sw model
Run on:	April 21, 2005, 20:23:24; Search time 569.772 Seconds (without alignments) 10815.645 Million cell updates/sec
Title: Perfect score: Sequence:	US-10-766-691-9 1041 1 atggaaaagtatgaaaaattaggtacttccgctcaaaagt 1041
Scoring table:	IDENTITY NUC Gapop 10.0 , Gapext 1.0

4390206 seqs, 2959870667 residues Searched:

Total number of hits satisfying chosen parameters:

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries length: 0 length: 2000000000 Minimum DB seq Maximum DB seq

geneseqn2003cs:\*geneseqn2003ds:\*geneseqn2004as:\*geneseqn2004bs:\* genesegn2002as:\*genesegn2002bs:\*genesegn2003as:\* geneseqn2003bs:\* Geneseq 16Dec04:\* geneseqn1990s:\* geneseqn2001as: geneseqn1980s:\* geneseqn2000s:\* geneseqn2001bs: •• Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Aad03815 Human kin Aad03817 Human kin Aad30557 Human kin Abx08936 cDNA enco Aas06725 Polynucle Aad03818 Human kin AAX71227 Human kin AAX71227 Human kin AAX4679 Human kin AAX4679 Human kin AAX4679 Human kin AAX4679 Human kin AAX63812 Human kin AAX63812 Human kin Aad03812 Human kin Aad03812 Human kin Aad03812 Human kin Aa44670 Novel pro AA129368 Mouse MAR AA219368 Mouse MAR Description SUMMARIES ADK71927 AA164248 AD140928 ABX34679
AAF44669
ADI29367
ADD03812
AAD03815
AAF44670
ADI29368
ABZ77165
ADO01536 AAD03816 Query Match Length DB 1429 Score 1041 1025 839 823 823 762.8 757 709 709 543.2 537 537 454.4 454.4 453.2 453.2 395 Result No.

New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.

Claim 1; Page 31-32; 38pp; English

Ado01535 Human cyc Abq93433 Human cDN Abv25864 Human pro Aaa29746 Rabbit KK Aaa29745 Rabbit KK Ab12603 Drosophil Adc77658 Human 162 Adq89155 Human uro Aaz51208 Human los Aaz51208 Human los Adis7213 Human los	Aas06724 POlynucle Acn42574 Human dia Aaz51207 Rat lost Aaz51206 Rat lost Ab11260 Drosophil Aas70329 DNA encod Aaf44672 Novel pro Ad129370 Human MAR Aax07476 Pueumocys Aax27476 Pueumocys Aax37835 Cyclin-de Aav71074 Green flu Aav71073 CDKZ-gree Abg60787 Human lOC Add21391 Human cyc
12 ADOO1535 6 ABQ9433 8 ABQ94834 3 AAA29746 3 AAA29745 4 ABL12603 10 ADC7758 13 AAZ51208 12 AD157213	4 AAS.06724 3 AACS42574 3 AACS51207 4 ABL12602 4 AAS.10329 4 AAF44672 12 AAS.07476 2 AAX.07476 2 AAX.071074 2 AAV.1073 10 ABS.2372 6 ABQ60787 11 ABS.2372
11178 2944 1698 3080 11179 2095 1513	11773 12503 12503 13297 11158 1866 1866 1635 110235 1297
2 2 2 3 3 3 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	199.5 1199.5 117.9 115.7 115.6 115.5 115.5
2002.6 2003.6 2003.6 2003.6 2003.6 2003.6 2003.6	202.6 202.6 102.6 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 6 6 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9

## ALIGNMENTS

Location/Qualifiers
1: .1041
/\*tag= a /\*product= "Human kinase #5"
/note= "The coding region does not include stop codon"
/partial Friedrich G, Zambrowicz B; Human; kinase; gene therapy; bioreactor; mental disorder; biological disorder; ss. AAD03816 standard; cDNA; 1041 BP Turner CA, Nehls M, 27-SEP-2000; 2000WO-US026621. 99US-0156511P. (LEXI-) LEXICON GENETICS INC (first entry) Human kinase cDNA #5. WPI; 2001-266166/27. P-PSDB; AAE00494. W0200123579-A1 Ното заріепв 28-SEP-1999; 19-JUN-2001 05-APR-2001. Donoho G, Sands AT; AAD03816; RESULT 1 AAD03816  N

```
The present sequence is a cDNA encoding novel human protein (NHP) known
                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                             1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Donoho G,
Sands AT;
                                                                         721
                                                                                                    781
                                                                                                                             781
                                                                                                                                                        841
                                                                                                                                                                                                           901
                                                                                                                                                                                                                                      106
                      661
                                              721
                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                         196
                                                                                                                                                                                                                                                                                                                                                                                                                                           AAD03813;
                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                   AAD03813
                                      ò
                                                                     임
                                                                                                   ò
                                                                                                                      g
                                                                                                                                                                                                                                a
                                                                                                                                                     ò
                                                                                                                                                                           a
                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is a cDNA encoding novel human protein (NHP) known as human kinases share structural similarity with animal kinases. The human kinases share structural similarity with animal kinases. Human kinase cDNA is useful for the detection of mutant human kinases. Human kinase cDNA is useful for the detection of mutant human kinase for streening drugs effective in the treatment of symptomatic or phenotypic screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for nucleotide sequences are useful for generating mental, biological or products related to human kinases, and as reagents in assays for medical disorders. NHP oligomucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying within the exons, introns and splica sites that can be used in the products are used to genetically engineer cells in vivo that functions as body. Nucleotide constructs encoding MHP bioreactors in the body delivering a continuous supply of NHP to the body delivering a continuous supply of the medulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                                                                                 1 AIGGAAAAGTAIGAAAAATTAGCTAAGACIGGAGAAGGGICTTAIGGGGTTGTAITCAAA
                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 TCAGTCGATATATGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCAGGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                         °;
                                                                                                                                                                                                                                                                                                                               Length 1041;
                                                                                                                                                                                                                                                                                                   Sequence 1041 BP; 344 A; 190 C; 228 G; 279 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                              Query Match
100.0%; Score 1041; DB 4;
Best Local Similarity 100.0%; Pred. No. 9.9e-268;
Matches 1041; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
ò
                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

```
780
                                                                                                                                                    840
                                                                                                                                                                                           840
                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                960
                                                                                           Location/Qualifiers
1. .1068
**tag= a /product= "Human kinase #2"
/prote= "The coding region does not include stop codon"
/partial
                                                                                                                                                                        AAAAGTAAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGAACTCTT
                                                                                                                                                                                                                             GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTTCTGAACTTCATGAAGGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                          AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                     841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                           ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zambrowicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, kinase; gene therapy; bioreactor; mental disorder; biological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Friedrich G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTACTTCCGCTCAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nehls M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAD03813 standard; cDNA; 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0156511P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-SEP-2000; 2000WO-US026621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 28; 38pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Turner CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human kinase cDNA #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-266166/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAE00491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200123579-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-APR-2001
```

```
WPI; 2001-266166/27.
P-PSDB; AAE00495.
                                                                                                                                                                                                                                                                                                                                                                        CAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                        CAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200123579-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Donoho G,
Sands AT;
                                                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAD03817;
                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                         721
                                                                                           781
                                                                                                                                                               841
                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                  901
                          721
                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAD03817
                                                                                                                  g
                                                                                                                                                             ð
                                                                                                                                                                                   셤
                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                         ò
as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase of the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic malifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying colymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP to the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         reagregarararegecrarregrargerrirrecagaecrecreacaeccaeccaec 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGTTTCGCCATGTTGACCAGGCTGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ccaaarcrigigaaccrcarcaaggraricaggagaaaaaggaaaargcarriagrrirr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                     98.5%; Score 1025; DB 4; Length 1068; 100.0%; Pred. No. 1.9e-263; vative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                      Sequence 1068 BP; 344 A; 197 C; 240 G; 287 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 1025; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
       $$$$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
840
                                                                                                         900
                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence is a cDNA encoding novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
/product= "Human kinase #6"
/note= "The coding region does not include stop codon"
GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCTTT
                                                                                                                             GAGGAAAAGTICTCAGAIGTICATCCTGTGGCTCTGAACTICATGAAGGGGTGTCTGAAG
                                             AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                            AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                         GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                       ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCT
                                                                                                                                                                                           ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Turner CA, Nehls M, Friedrich G, Zambrowicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; kinase; gene therapy; bioreactor; mental disorder; biological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 3; Page 33; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (LEXI-) LEXICON GENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                             AAD03817 standard; cDNA; 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-SEP-2000; 2000WO-US026621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              partial/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l. .945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human kinase cDNA #6.
```

4

the diagnosis of disease, and also as a therapeutic. It is useful for the diagnosis of disease, and also as a therapeutic. It is useful for secreening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the continuous continuous encoding need to the continuous continuous continuous in gene therapy for the modulation of NHP expression

Sequence 945 BP; 323 A; 165 C; 202 G; 255 T; 0 U; 0 Other;

96; Gaps 80.6%; Score 839; DB 4; Length 945; 90.8%; Pred. No. 9e-214; ive 0; Mismatches 0; Indels Best Local Similarity 90.8 Matches 945; Conservative Query Match

Ä

09 1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA

> ò g

ð q 원

ò 셤 à g à 셤 à g ò ВÞ ò 유 à 셤 à 원

à

180 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 121

601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT-----

900 099

GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 721

g 8

744 900 960 --AGGAAAATTAATCCCAAGACATCAATCTTT 684 745 GAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGTGTCTCGAAG GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGGTGTCTGAAG ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCT Argaarccagargacagarraaccrerreccaacrecregagagcrecracrrrgarrer AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT CAGGTACTTCCGCTCAAAAGT 1041 CAGGTACTTCCGCTCAAAAGT 945 1021 925 781 685 841 901 805 651 196 셤 셤 8 ð d õ Dp ò ò

RESULT 4

BP. AAD03814 standard; cDNA; 972

AAD03814;

(first entry) 19-JUN-2001

Human kinase cDNA #3.

Human; kinase; gene therapy; bioreactor; mental disorder; biological disorder; ss.

Homo sapiens

\_note= "The coding region does not include stop codon" (partial "Human kinase #3" Location/Qualifiers 1. .972 /\*tag= a /product=

WO200123579-A1

05-APR-2001,

27-SEP-2000; 2000WO-US026621.

28-SEP-1999;

(LEXI-) LEXICON GENETICS INC

Zambrowicz Friedrich G, Donoho G, Turner CA, Nehls M, Sands AT; 

ä

WPI; 2001-266166/27. P-PSDB; AAE00492.

New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases. New isolated human kinase polynucleotide useful for antibodies, as reagents in diagnostic assays and for

Disclosure; Page 29~30; 38pp; English.

for The present sequence is a cDNA encoding novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for 900 804 960 864

840

\$

ઠે 8 ઠે 요 Š 8 ò 셤 Š 유 ⋧ 셤 ઠે 셤 8

```
Human; kinase polypeptide; PKIN-10; gene therapy; Addison's disease; leukaemia; immune disorder; lymphoma; melanoma; developmental disorder; acquired immunodeficiency syndrome; AIDS; allergy; ansemia; hyportenabion; asthma; Crohn's disease; rheumatorid arthritis; bursitis; atherosclerosis; cirrhosis; hepatitis; psoriasis; Cushing's syndrome; cytostatic; cancer; cholestasis; cardiout, cardiovascular disorder; Niemann-Pick's disease; lipid disorder; fatty liver; Gaucher's disease; myocardial infarction; drug screening; transgenic animal; antiinflammatory; hepatotropic; hypotensive; anti-HIV; enzyme; ss.
                                                                                                                                                                                                                                                                              AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                  ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                     GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTTCATGAAGGGGTGTCTGAAG
                                                                                                                                         GAGGAAAAGTICTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                               ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gururajan R, Hafalia AJA, Walia NK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patterson C, Ramkumar J, Gandhi AR, Policky JL, Baughn MR; Tribouley CM, Bandman O, Nguyen DB, Lu Y, Burford N, Lal P, Yao MG, Elliott VS, Recipon SA, Kearney L, Lu DAM, Greenwald Tang YT, Xu Y, Walsh RT, Gietzen KJ, Yang J, Hillman JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New human kinase polypeptide, useful in diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "Human PKIN-10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human kinase polypeptide (PKIN-10) cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
239. .1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAD30557 standard; cDNA; 1790 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thornton M, Yue H, Khan FA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-2000; 2000US-0220038P.
28-JUL-2000; 2000US-022112P.
04-AUG-2000; 2000US-022831P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-JUL-2001; 2001WO-US023092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0224729P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-206083/26.
P-PSDB; AAE19152.
                                                                                                                                                                                                                                                                                                                                    CAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (THOR/) THORNTON M.
                                                                                                                                                                                                                                                                                                                                                                  CAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200208399-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rang YT,
                                                               685
                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                        925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAD30557;
                                                                                                     841
                                                                                                                                         745
                                                                                                                                                                                                                    805
                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                              865
                           781
                                                                                                                                                                                                                                                                                                                                                                                                                             AAD30557
                                                                                                                             g
                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8
                                                                                       ઠે
                                                                                                                                                                             8 8
                                                                                                                                                                                                                                          ⋧
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                            a
screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP poligonocleotides are used as probes. The labelled polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGATCAAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTGTATTCACAGAGATATAAAACCTGAAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGCTACGAGATACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                            96; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT-
                                                                                                                                                                                                                                                                                                                                                    79.1%; Score 823; DB 4; Length 972; 90.6%; Pred. No. 1.7e-209; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                Sequence 972 BP; 323 A; 172 C; 214 G; 263 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                          therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.6
Matches 929; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       551
```

유

Ŕ

δ g ઠ 셤 8 a ઠ a

ਨੇ

ä

Ding SR;

treatment of cancer, immune disorder, growth and developmental disorder, cardiovascular disorder and lipid disorder.

Page 183; 196pp; English. Claim 5;

The present invention relates to an isolated human kinase polypeptide (PKIN) or a biologically active/immunogenic fragment of PKIN. PKIN is useful for diagnosing, treating and preventing acancer (e.g., leukaemia, Immune disorder (e.g., acquired immunodeficiency syndrome (AIDS), Addison's disease, allergy, anaemia, asthma, Crohn's disease, rheumatoid arthritis, a growth and developmental disorder (e.g. syndrome), a cardiovascular disorder (e.g., atherosclerosis, hypertension, myocardial confaction), and a lipid disorder (e.g., fatty liver, cholestasis, Gaucher's disease, Niemann-Pick's disease). PKIN is useful in a number of drug screening techniques and to analyse the proteome of a tissue or cell type. PKIN is useful for creating knockin humanised animals or transgenic animals to model human diseases, in somatic or generate a transcript image of a tissue or cell type, for detecting differences in the chromosomal location due to translocation, inversion, etc., among normal, carrier or affected individuals, and as hybridisation probes for mapping naturally occurring genomic sequences. PKIN is useful to suchern or northern analysis, dot blot or other membrane-based continued immunosorbent (ELISA)-like assays and in microarrays utilising fluids or tissues from pattients to odecet altered PKIN expression. The present sequence is human PKIN-10 cDNA 

Sequence 1790 BP; 581 A; 328 C; 366 G; 515 T; 0 U; 0 Other;

Gaps 96; Length 1790; 0; Indels Score 821; DB 6; L Pred. No. 7.4e-209; 0; Mismatches 0; 78.9%; 90.6%; Best Local Similarity 90.6 Matches 927; Conservative Query Match

239 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 298 1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA

> d ò g ò g 8 g ò 유 ò g ò 유 à 셤 ò g ò

479

300 538 360 598

719 GTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 181

922 840 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT 983 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC -------AGGAAATTAATCCCAAGACATCAATCTTT GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 1103 TTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGTAATGAAGGAGAAAAAGAAGAAGGCCCAA 781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT 1043 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT 839 redecrecaaaarcadarereeaccaacrirarcrearaarcagaacacr 1021 CAG 1023 1163 CAG 1165 199 889 923 841 961 889 901 8 유 ∂ g g ð a à ò g ò g ò

ABX08936 standard; cDNA; 1678 BP RESULT 6

(first entry) 21-JAN-2003

cDNA encoding human DITHP protein #6.

180

Human; ss; gene; diagnostic and therapeutic; DITHP; cancer; arteriosclerosis atherosclerosis; psoriasis; primary thrombocytopenia; autoimmune; inflammatory; anaemia; asthma; autoimmune thyroiditis; crohm's disease; diabetes mellitus; glomerulonephritis; gout; stroke; multiple sclerosis; rheumatoid arthritis; uveitis; AIDS; allergy; Alzheimer's disease; dementia; mental retardation; gastrointestinal; Parkinson's disease; dementia; mental retardation; gastrointestinal; Parkinson's disease; ulcer; cirrhosis; reproductive; infertility; endometriosis; endocrine disorder; hyperparathyroidism; hyperligidemia; hyperparathyroidism; hyperligidemia; hyperparathyroidism; syndrome; connective tissue disorder; osteoporosis; infection.

Homo sapiens

WO200279473-A2. 10-OCT-2002 09-JAN-2002; 2002WO-US001009

2001US-0261622P. 2001US-0261864P. 2001US-0261865P. 2001US-0262164P. 2001US-0262164P. 16-JAN-2001; 16-JAN-2001; 17-JAN-2001; 17-JAN-2001; 12-JAN-2001; 17-JAN-2001; 

> 540 778

2001US-0262208P. 2001US-0262209P. 2001US-0262215P. 2001US-0263102P 17-JAN-2001; 17-JAN-2001; 18-JAN-2001;

478

610 535

us-10-766-691-9.rng

```
596 CACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAG 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              656 AGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCAC 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----AGGAAATTAATCCCAAGACTCAATCAA 814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   815 rcititada de caracteristrica de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contracta de contract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; protein kinase; PTK; STK; cancer; cardiovascular disease; metabolic disorder; immune related disease; neurological disorder; neurodegenerative disorder; inflammatory disorder; infectious disease; reproductive disorder; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              671 GTTCTTCAGTCGATATATGGGCTATTGGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       776 TCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    875 CTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       896 TGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTG
                                                                           ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                            419 TCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         479 ATGTAGCTA-CGAGATGGTACCGAGCT-CCTGAACTTCTTGTGGGAGATACT-CAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GITCTICAGICGATATATGGGCTATIGGITGTTTTTTTGCAGAGCTCCTGACAGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAAAACTTCATGAAGGGGTGTC
       239 TIGAAIACTGTGATCATACACTITITAAAIGAGCTGGAAAGAAACCCAAAIGGAGITGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polynucleotide sequence encoding human protein kinase #25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS06725 standard; cDNA; 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1016 GCCAACAG 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-SEP-2001
                                                                                                                                                                                                                                                                                                359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAS06725;
                                                                                                                                                   599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
AAS06725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polymucleotides for diagnostics and therapeutics (DTHP). The human DITAP polymucleotides and polypeptides are useful for diagnosing, preventing or treating diseases associated with, as well as effects of exogenous compounds, on the expression of human molecules, such as cell polymucleotides in the expression of human molecules, such as cell compounds, on the expression of human molecules, such as cell polymeral polymeral as the molecules, attendance or disease, diabetes (e.g. anaemia, asthma, autoimmune/inflammatory diseases. (e.g. anaemia, asthma, autoimmune/inflammatory diseases.)

The mental second dispersion of mental seclerosis, rheumatoid content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131 ATGGAGAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              191 TGCAGATAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAAATTTGTGGAATCTGAAGA 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTA-TGTTGAAGCAATTAAAAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTACTGTTGAAGCAATTAAAAC 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ÄÄ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGA-AACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This invention relates to the cDNA and protein sequences of fifty six
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New human diagnostic and therapeutic (DITHP) polynucleotides and polypeptides, useful for diagnosing, preventing or treating diseases, e.g. cancer, AIDS, Parkinson's disease, or autoimmune/inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels 101; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match 73.3%; Score 762.8; DB 10; Length 1678; Local Similarity 90.0%; Pred. No. 2.6e-193; Loservative 0; Mismatches 2; Indels 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           I, Lincoln SE, Altus CM, Dufour GE, Hillman JL,
Liu TF, Harris B, Plores V, Daffo A, Marwaha R,
Gerstin EH, Peralta CH, David MH, Lewis SA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1678 BP; 541 A; 308 C; 336 G; 493 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 267; 331pp; English.
                                                                2001US-0262760F.

2001US-0263663P.

2001US-0263064P.

2001US-0263065P.

2001US-0263065P.

2001US-026377P.
                                                                                                                                                                                                                                                                                                                                  2001US-0263330P
                                                                                                                                                                                                                                                                                                                                                                                                          (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-040680/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; ABU05290
                                                                                                                                                                                                                    19-JAN-2001; 219-JAN-2001; 2
19-JAN-2001;
19-JAN-2001;
19-JAN-2001;
                                                                                                              19-JAN-2001;
19-JAN-2001;
19-JAN-2001;
                                                                                                                                                                                                                                                                                                                                  19-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dam TC, Li
Chang SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Panzer SR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e.g. canc diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
```

유

Š

a

ઠે

g

ઠે

œ

```
361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                 421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGAGTAATTCACATGTTGGGAGAATTGAC 480
                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                         099
                                                                                                                                                                                                                                                                                                                                                                                   999
                                                                                                                                                                                                                                                                                                                                                                                                                                                             667 CGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCC 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAAT 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAA 966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCCCAAATTAAAAGAAAAGCACGTAATGAAGGAAGAAACAGAAGAGGCCAACAG 1023
                                                                                                                                                                                                                                      ACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTC
                                                                                                                                                     181 TTACCTGATCTGATTGATGCATTTGCAGTTCCAGGAGATGCCTACACCGATTATGTAGGT
                                                                                                                                                                                                                                                                                                                                                                              GGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACGGGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCCCAAATTAAAAGAAAAGCACGTAATGAAGGAAGAACAGAAGAACGCCAACAG 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= d
/note= "polymorphism site; given as r in the sequence"
                                                                                                                                                                                                            ACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTC
                                                                                                                                                                                                                                                                                             -------AGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                787 AACGGGTTTTTCCATGGCATCAGTATACCTGAGGCCAGAAGACATGGAAACTCTTGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     745 AACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           865 CCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 GGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; kinase; gene therapy; bioreactor; mental disorder;
biological disorder; polymorphism; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Human kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAD03818 standard; cDNA; 1819 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  702. .1819
/*tag= c
1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .137

*tag= a

138. .701

/*tag= b

/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human kinase cDNA #7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                             547
                                                                                                                          455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
AAD03818
                                                                      g
                                                                                                                                                                                                                                               g
                                     8
                                                                                                                      8
                                                                                                                                                         g
                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAS06701-AAS06757 encode for novel human protein kinases #1-57. The novel protein kinases have been identified as members of the tyrosine or scrine/threonine kinase (PTK and STK) families. The polymucleotides encoding protein kinase and the polypeptides may be used in the prevention, diagnosis and treatment of disease associated with impapropriate kinase expression. For example, they may be used to treat cancers (especially cancers of haematopoletic origin), cardiovascular disease (e.g. atherosclerosis), metabolic disorders (e.g. diabetes), immune related diseases (e.g. rheumatoid arthritis), neurological disorders (e.g. clisophrenia), neurodegenerative disorders (e.g. parkinson's disease), inflammatory disorders (e.g. asthma), infectious disease (e.g. HIV) and reproductive disorders (e.g. infertility). Additionally, polymucleotides encoding protein kinases may be used for gene therapy and as DNA probes in disponstic assays. The protein kinase polypeptides may be used as antigens in the production of antibodies against the protein kinases and in assays to identify modulators of protein kinase expression and activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                             Nucleic acids encoding human kinase polypeptides, useful for preventing diagnosing and/or treating e.g. cancer, immune, cardiovascular and neuronal-associated diseases, and microbial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGAAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels 150;
                                                                                                                                                                                                                             Martinez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1083 BP; 366 A; 199 C; 225 G; 293 T; 0 U; 0 Other;
                                                                                                                                                                                                                         Sudarsanam S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72.7%; Score 757; DB 4; I
86.1%; Pred. No. 7.7e-192;
Live 0; Mismatches 0;
                                                                                                                                                                                                                         Manning G,
                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Fig 1; 433pp; English.
                                                                                          22-NOV-2000; 2000WO-US032085.
                                                                                                                                   24-NOV-1999; 99US-0167482P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 927; Conservative
                                                                                                                                                                                                                       Whyte D,
Clary D;
                                                                                                                                                                                                                                                                                    WPI; 2001-343950/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                           (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                        P-PSDB; AAU03525
        WO200138503-A2
                                                                                                                                                                                                                       Plowman GD,
Flanagan P,
                                                  31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
```

g ò g ö 원 g

Š

a

ò

ò

us-10-766-691-9.rng

```
CCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTA 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cerecectadecercreandreceredantracheanantraneceandacarcanten 1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCTTTAAAAGTAACGGGTTTTTCCATGCCATCAGTATACCTGAGCCCAGAAGACATGGAA 1277
                                                                                                                                                                                                                     618 TCCTTGATTGGCTTAATAGTTGACCTTCTGAATTCTTTTTTCTGCCAATTCAGAGATTTTT 677
                                                                                                                                                                                                                                                                                              678 CTCCTGGCTTGGATCCATTGCTGACACAGTGTTTCACCATGGGGCCCCAGGCTCATCTCGA 737
                                                                                                                                                                                                                                                                                                                                                                    738 ACTITCTGGCCTCAAGTGATCCTTCCACCTCGGCCTCCCAAAGTGCTGGATTGCAAGTGTG 797
                                                                                                                                                                                                                                                                                                                                                                                                                                           798 AGCCACCGTGCCCAGCCAGATTTTTCAAACAATAACTACTGAGAGCTCACAAGATTGTTT 857
438 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 497
                                                                                                                                               558 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGAGTTGGACTTCATCTTTCTCTGGTGCC
                                                         858 TTAGTGGGAACACAATTTCGAACAAATTCTTGAGAACGCATTCCAGGAGATGCCTACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTATGTAGGTACGAGATGGTACCGAGGTCCTCAACTTCTTGTGGGAGATACTCAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1338 CTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTT
                                      AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1098 GAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1278 ACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u> ACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTTCATGAAGGGGTGT</u>
                                                                                                        421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCAACAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCCAACAGGT 1468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1458
                                      361
                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     835
                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                154
                                                                                                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
ADK71927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                             ⋧
                                                                                                                                         원
                                                                                                                                                                                 ò
                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence encodes a novel human protein (NHP) which is a human kinases. A polymorphism was identified in the 3' UTR of the present sequence. The human kinases share structural similarity with animal kinases. More particularly serine or threenine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of Symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP conclective sequences are useful for generation of antibodies, as reagents in micleotide sequences are useful for generation of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or screening disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTAFGGGGTTGTATCAAA 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGAAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          recadaaacaaaaccreregacaagragragererraaaaarrreregaarereaagar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels 306; Gaps
                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 709; DB 4; Length 1819;
Pred. No. 6.2e-179;
0; Mismatches 0; Indels 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1819 BP; 539 A; 368 C; 406 G; 505 T; 0 U; 1 Other;
                                                                                                                                                                                                  Zambrowicz
                                                                                                                                                                                                  Friedrich G,
                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 34-35; 38pp; English
                                                                                                                                                                                                Nehls M,
                                                                                       27-SEP-2000; 2000WO-US026621.
                                                                                                                           99US-0156511P
                                                                                                                                                              (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 77.0%;
Matches 1025; Conservative (
                                                                                                                                                                                                  Turner CA,
                                                                                                                                                                                                                                                         WPI; 2001-266166/27.
                                                                                                                                                                                                                                                                         P-PSDB; AAE00490
                 WO200123579-A1
                                                                                                                           28-SEP-1999;
                                                     05-APR-2001
                                                                                                                                                                                                  Donoho G,
Sanda AT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
```

1037

654

594

917

474

1157

774

834

714

1337

894

1397

P-PSDB; ADK71868 WO2004018641-A2 

```
ADK71927 standard; cDNA; 1266
```

(first entry) 20-MAY-2004 Human kinase and phosphatase KPP-45 cDNA

human; kinase; phosphatase; KPP; cardiovascular; antiarteriosclerotic; hypotensive; vasotropic; antiinflammatory; antianginal; anti-HIV; antialefumatic; immunosuppressive; antithyroid; dermatological; antidabetic; nephrotropic; antigout; gastrointestinal; neuroprotective; osteopathic; antiarthritic; uropathic; ophthalmological; antirhosmian; nootropic; anticonvulsant; hepatotropic; antipportatic; cytostatic; antipportatic; cytostatic; antipportatic; antibacterial; virucide; protozoacide; fungicide; cardiovascular disease; immune system; neurological; growth; development; cell proliferation; viral; bacterial; fungal; parasitic; protozoan; helminthic infection; transgenic; gene therapy; ss; gene

Homo sapiens.

04-MAR-2004

25-AUG-2003; 2003WO-US026635.

26-AUG-2002; 2002US-0406172P. 25-SEP-2002; 2002US-0413910P. 27-SEP-2002; 2002US-0414236F. 11-OCT-2002; 2002US-0417821P.

(INCY-) INCYTE CORP

, Richardson TW, Marquis JP, Swarnakar A, Tang YT;
Emerling BM, Jin P, Wilson AD, Yue H, Gietzen KJ;
Yang YG, Lee SY, Khare R, Elliott VS, Hafalia AJA;
, Ramkumar J, Gururajan R, Tribouley CM, Chien D, Chawla NK, Murage J; Baughn MR, Becha SD, Chang H,

Tran UK;

WPI; 2004-226830/21.

New human kinases and phosphatases, useful for diagnosing, treating or preventing atherosclerosis, hypertension, AIDS, allergy, multiple sclerosis, osteoarthritis, Alzheimer's disease, Crohn's disease, cancer or hepatitis.

Claim 5; SEQ ID NO 104; 347pp; English.

The invention relates to a novel isolated polypeptide which is a human kinase and phosphatase (KPP). The polypeptide of the invention demonstrates cardiovascular, antiarteriosclerotic, hypotensiave, vasotropic, antiaflammatory, antianginal, antiaflariasion, antiaflammatory, antianginal, antiaflariasion, esteppathic, antiaflate, antiaflabetic, antiaflabetic, antiaflabetic, antiaflabetic, antiathemic, antiparkinsonian, nootropic, antigout, gastrointestinal, neuroprotective, osteopathic, antiarthritic, uropathic, antiparasitic, antiparasitic, antipacterial, virucide, protozoacide and fungicide activities. The kinase and phosphatase (KPP) polynucleotides, polypeptides, agonists and antibacterial, virucide, protozoacide and fungicide activities. The kinase and phosphatase (KPP) polynucleotides, polypeptides, agonists and antibacterial, virucide, protozoacide and fungicide activities. The kinase and phosphatase (KPP) polynucleotides, polypeptides, agonists and alsorders such as cardiovascular diseases, immune system disorders, call diseases, immune system disorders in curological disorders affecting growth and development, cell protozoan or helminthic infections. Furthermore, the molecules of the invention may be useful for creating transgenic animals to model human kep ponna of the invention approaches. KPP cDNA of the invention.

Sequence 1266 BP; 414 A; 234 C; 254 G; 364 T; 0 U; 0 Other;

Query P Best Lo Matche	y Match Local Similari hes 927; Cons	67.4%; Score 702; DB 12; Length 1266; ity 81.9%; Pred. No. 4e-177; servative 0; Mismatches 0; Indels 205; Gaps 2;
λõ	1 ATGGAA	CTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA 6
qq	54 ATGGAA	AIGGAAAAGTAIGAAAAATTAGCTAAGACTGGAGAAGGGTCTTAIGGGGTTGTATTCAAA 113
λo ·		AAAACCTCTGGACAAGTAGTAGTAGTTAAAAATTTGTGGAATCTGAAGAT 12
Q C	114 TGCAGA	AACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 173
λΌ	1 GATC	CTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
qq	174 GATCCT	GTIGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 233
δ	181 CCAAAT	CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240
qq	234 CCAAAT	CTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT 293
δ	241 GAATAC	GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA
qq	294 GAATAC	TGTGATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGAT 353
ර ස	01	9
9	4	r 41
ර අ	361 AACTGT        414 AACTGT	AACTGTATTCACAGAGATATAAAACCTGAAATATTCTAATAACTAAGGAAGAATAATC 420 
ò	421 AAGATT	- 45
qa	 474 AAGATT	
ò	455	454
Οβ	534 TCCTTG	ATTGGCTTAATAGTTGACCTTCTGAATTCTTTTTCTGCCAATTCAGAGATTTTC 593
δý	455	TTCCAGGAGATGCCTACACCGATTATGTAGCTACGAG 491
Db	594 TCCCTG	CCCTGGCTTGGATCCATTGCTGTTCCAGAGATGCCTACACCGATTATGTAGCTACGAG 653
ò	492 ATGGTA	TGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATAT 551
QQ	654 ATGGTA	CCGAGCTCCTGAACTTCTTGTGGGAGAGATACTCAGTATGGTTCTTCAGTCGTATAT 713
ογ	552 ATGGGC	TIGGGCTATIGGTTGTGTTTTGCAGAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAA 611
Dp	714 ATGGGC	PATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAA 773
ò	a	GCCA 67
qq	774 ATCAGA	IGTGGACCAACTTTATCTGATAATCAGAACACT
λõ	672 TGTTGA	CCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCA 731
QQ	813	812
ò	732 AAGTGC	IGGAATTACAGGAAAATTAAATCCCAAGACATCAATCTATTAAAAGTAACGG 791
qa	813	AGGAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACG 857
ò	92	rcttgaggaaaagtt 8
<u>a</u>	20	σ
δ.	20	
9 8	. a	ט מ
Š	912 TGACAG	IGACAGAITIAACCIGITICCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGC 971

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AD140928
ID AD14
XX
AC AD14
XX
XX
DT 22-A
XX
XX
XX
XX
XX
XX
XX
XX
셤
                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엄
                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윤
              TGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGC 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated 14257 polypeptide and nucleic acid encoding it. The 14257 protein is a protein kinase that acts as a modulating agent in regulating a variety of cellular processes, including cell proliferation, differentiation, growth and division. The activity of the protein of the invention may be described as, cytostatic, osteopathic; hepatotropic; antidiabetic; neuroprotective; antiarthritic; dermacological; immunosuppressive; antialfammatory; antithyroid; antipsoriatic; ophthalmological; antiallergic; antiatrhyroid; antiatherosclerotic; hypotensive; vasotropic; antiarrhythmic; virucide; anorectic; metabolic; immunomodulator and analgesic. The protein of the
                                                                                                                                                                                                                                                      antidiabetic, neuroprotective, antiarthritic; dermatological; immunosuppressive; antiinflammatory; antithyroid; antipsoriatic; ophthalmological; antiallergic; antiathmatic; antiatherosclerotic; hypotensive; vasotropic, antiarthythmic; virucide; anorectic; metabolic; immunomodulator; analgesic; callular proliferative disorder; cancer; acute lymphoblastic leukaemia; Hodgkin's disease; bono metabolism disorder; osteoporosis; immune system disorder; inflammatory; diabetes mellitus; osteoarthritis; asthma; cardiovascular disorder; hypotension; coronary artery disease; endothelial cell disorder; psoriasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New 14257 polypeptides (protein kinases), useful as diagnostic targets and therapeutic agents for controlling cellular proliferative and/or differentiative disorder, bone disorders, immune disorders and
                                       CCAAATTAAAAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG 1023
                                                                                                                                                                                                                                            Protein kinase; enzyme; cytostatic; osteopathic; hepatotropic;
                                                        1038 CCAAATTAAAAGAAAAAGCACGTAATGAAGGAAGAAAAAAAGAAGAAGAACAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Protein kinase 14275"
                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Fig 1A; 98pp; English
                                                                                                                                   AAI64248 standard; cDNA; 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-APR-2001; 2001WO-US012188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-APR-2000; 2000US-0196910P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
129. .815
/*tag= b
/product= '
                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag≈ c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cardiovascular disorders.
                                                                                                                                                                                                               Human kinase 14257 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-034355/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kapeller-Libermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-034355/(
P-PSDB; AAG78547.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200179488-A2
                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                       08-MAR-2002
              978
                                       972
                                                                                                                                                              AAI64248;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3' UTR
                                                                                                        RESULT 10
AAI64248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SDS
              셤
                                      ઠે
                                                               g
```

```
invention may act as a novel diagnostic target or therapeutic agent controlling certain disorders, for example kinase-associated or other 14257-associated disorders. These may include cellular proliferative disorders such as cancers e.g. acute lymphoblastic leukemia or Hodgkin's disease. Other disorders include bone metabolism disorders such as osteoporosis, disorders of the immune system, e.g. inflammatory diabetes mellitus, osteoarthritis and asthma. Proteins of the invention may also be of use as therapeutic agents in cardiovascular disorders such as hypertension and coronary artery disease, and some endothelial cell disorders, including psoriasis. The current sequence represents a human kinase 14257 cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129 ATGGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  669 rcagricananaragecharregringrenringcagaecrecreacaeccaeccaere 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              429 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    609 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189 TGCAGAAACCAAAAACCTCTGGACABGTAGTAGCTGTTAAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        249 GATCCTATTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    549 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human kinase and phosphatase KPP-41 encoding cDNA SEQ ID NO:94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAG
                                                                                                                                                                                                                                                                                                                                                                                                            Length 882;
                                                                                                                                                                                                                                                                                                                                                     Sequence 882 BP; 288 A; 150 C; 198 G; 245 T; 0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              5: Indels
                                                                                                                                                                                                                                                                                                                                                                                                       Score 644; DB 6; I
Pred. No. 1.1e-161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADI40928 standard; cDNA; 1429
                                                                                                                                                                                                                                                                                                                                                                                                       tch 61.9%; al Similarity 99.2%; 647; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADI40928;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
```

Ношо 

human; kinase and phosphatase; KPP; enzyme; cardiovascular; antiarteriosclerotic; hypotensive; vasotropic; antialflammatory; antianginal; anti-HIV; antiallergic; antiasthmatic; immunosuppressive; antithyroid; dermatological; antidiabetic; nephrotropic; antigout; gastrointestinal; neuroprotective; osteopathic; antiarthritic; uropathic; ophthalmological; antirheumatic; antipachinsonian; noctropic; anticornulsant; hepatotropic; (NNS; antipornatic; hemostatic; antilogatic; antilogatic; hemostatic; antilogatic; entilogatic; antipachinsonian; phosphatase modulator; cardiovascular disease; immune system disorder; neurological disorder; growth and development disorder; infection; gene; ss.

sapiens

Location/Qualifiers 70. .621

/\*tag= a /product= "kinase and phosphatase KPP-41"

WO2004009778-A2

29-JAN-2004

18-JUL-2003; 2003WO-US022650

19-JUL-2002; 2002US-0397354P. 02-AUG-2002; 2002US-0400599P. 02-AUG-2002; 2002US-0400783P. 15-AUG-2002; 2002US-04007PBP.

(INCY-) INCYTE CORP

Lee EA; Kable AE, Richardson TW, Becha SD; 3, Lee SY, Griffin JA, Khare R; s PR, Swarnakar A, Chawla NK, Tran UK; ils JP, Thornton MB, Forsythe IJ, Lee | A, Emerling BM, Kable AB, Tang YT, Lal PG, Lee S) Jin P, Hawkins PR, Swa R, Ding L, Marquis JP, T Baughn MR, Ta Elliott VS, J Gururajan R, Hafalia AJA, Gietzen KJ,

WPI; 2004-132950/13. P-PSDB; ADI40875.

preventing atherosclerosis, hypertension, AIDS, allergy, multiple sclerosis, osteoarthritis, Alzheimer's disease, Crohn's disease, cancer New human kinases and phosphatases, useful for diagnosing, treating or or hepatitis.

Claim 5; SEQ ID NO 94; 330pp; English

The present sequence encodes a human kinase and phosphatase (KPP)

C protein. KPP sequences have cardiovascular, antiarteriosclerotic,

C protein. KPP sequences have cardiovascular, antiarteriosclerotic,

antiallergic, antiasthmatic, immunosuppressive, antithyroid,

antiallergic, antidabetic, nephrotropic, antithyroid, gastrointestinal,

c enuroprotective, osteopathic, antiarthritic, uropathic, ophthalmological,

antirheumatic, antiparkinsonian, nootropic, anticonvulsant, hepatotropic,

CNS, antipsoriatic, hemostatic, cytostatic, antilipsemic, antiparasitic,

antirheumatic, antibacterial, virucide, protozoacide and fungicide

continhelminthic, antibacterial, virucide, protozoacide and fungicide

activities, and can be used in gene therapy, and as kinase modulators mpt

contropicities can be used for diagnosing, treating or preventing disorders

conteaged with aberrant expression of RPP, such as cardiovascular

conteages (alberes melilue), immune system disorders (e.g. AIDS,

allergies, asthma, autoimmune thyroiditis, contact dermatitis, crohn's

disease, diabetes mellitus), immune system disorders (e.g. AIDS,

allergies, pathma, autoimmune thyroiditis, contact dermatitis,

costeoporosis, pancreatitis, Reiter's syndrome, rheumatoid arthritis,

costeoporosis, pancreatitis, Reiter's syndrome, rheumatoid arthritis,

costeoporosis, pancreatitis, neurological disorders (e.g. Alzheimer's

contactive syndrome or uvetis), neurological disorders (e.g. Alzheimer's

contactive syndrome or uvetis), neurological disorders (e.g. cirrhosis,

contactive mixed connective tissue disease, psoriasis or primary

contactive incombocytopenia), cell proliferative disorders (e.g.

909 801

850 acadeceaeceaereregesectrosaaaarcagareregaeceaecrriareregaraareaga 742 ATTACAGGAAAATTAATCCCAAGACATCAATCATCTTTAAAAGTAACGGGTTTTTCCAT

g ò

120 189 180 369 129 249 240 309 300 360 429 420 489 470 549 609 559 699 729 636 789 681 849 741 fungal, parasitic, protožoan or helminthic infections. The KPP and polymuclectides are also useful in assessing the effects of exogenous compounds on the expression of nucleic acids and kinases and phosphatases, or for facilitating the drug discovery process, including determination of efficacy, dosage, toxicity and pharmacology. The polymuclectides encoding KPP are useful for creating transgenic animals to model human disease. TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 130 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 190 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 250 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAAATTTCTGTCATATACAT AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 430 AACTGTAITICACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 490 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGAACACAGTGTTTCACCATGGGGCCCCAG GCTCATCTCGAACTTCTGGCCTCAAGTGATCCTTCCACCTCGGCCTCCCAAAGTGCTGGA 670 CAAGATIGITITIAGIGGAACACAATITICGAACAAATITCITIGAGAACGCATICCAGGAG 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 370 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTA-----511 CTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGCTA-----610 Tracaagrereaeccaeccaeccaeccaerrrrrcaaacaaraacreeaegecca ----TTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCC -GCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTG 730 ATGCCTACACCGATTGTGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAG ATAATCAGAACACTAGTAGAGACG-------GGGTTTCGCCATGTTGACCAG 790 ATACTCAGTATGGTTCTTCAGTCGATATGGGCTATTGGTTGTTTTTGCAGAGCTCCTG 682 GCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGA ----CACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAA Gaps . 66 Length 1429; Sequence 1429 BP; 466 A; 286 C; 294 G; 383 T; 0 U; 0 Other; Indels hypercholesterolaemia, hyperlipidaemia or cancer), 0; Mismatches 175; 58.0%; Score 604; DB 12; 75.6%; Pred. No. 6.5e-151; Local Similarity 75.6 les 848; Conservative Ä 61 Query Match 121 301 361 421 471 550 260 637 593 Matches 88888888888888 à 셤 ò d g ò 유 ò qq 셤 ઠે ò g ò ò В ઠે 셤 ò q à 셤 ò g ਨੇ

```
This invention describes a novel disease detection and treatment molecule polypeptide (MDDT) which has anti-inflammatory, immunosuppressive, cateopathic, cytostatic, anti-inflammatory, immunosuppressive, cateopathic, cytostatic, anti-infly, haemostatic, nephrotropic, cateopathic, cytostatic, anti-place of the invention can be used for gene therapy, and the polypeptides of the invention can be used for gene therapy, cretein replacement therapy and are useful for treating a variety of diseases or conditions. These polypeptides or polynuclectides are particularly useful for diagnosing, treating or preventing cell proliferative disorders (e.g. cancers including adenocarcinoma, cell-eukaemia, lymphoma, melanoma, myeloma or sarcoma), anaemia, Crohn's disease, acquired immunodeficiency syndrome (ALDS), Goodpasture's syndromes, inflammation, osteoporosis, thrombocytopaenia, psoriasis or hepatitis. ARX3440-ABM11845, described in the MDDT polypeptides represented in ABU11850-ABM11845, described in the did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                     Query Match 52.2%; Score 543.2; DB 8; Length 1281; Best Local Similarity 99.5%; Pred. No. 1.1e-134; Matches 545; Conservative 0; Mismatches 3; Indels 0;
                                                                                                                                                                                                                                                                                                                                                 Sequence 1281 BP; 428 A; 191 C; 317 G; 345 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF44669 standard; cDNA; 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1244 ŤČÁĞŤČAĂ 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGTCGA 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF44669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                 1030 CATCCTGTGGCTCTGAACTTCATGAAGGGTGTCTGAAGATGAATCCAGATGACAGATTA 1089
                                                                                                                                                                                                           ACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAA 1149
                                                       CATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTA 921
ACACTAGGAAAATTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCAT 969
                                      861
                                                                                                                                                                                   ACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAA 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDDT; human; disease detection and treatment molecule polypeptide; anti-inflammatory; immunosuppressive; osteopathic; cytoofatic; anti-HIV; haemostatic; nephrotropic; antianaemic; antipsoriatic; hepatotropic; gene therapy; protein replacement therapy; cell proliferative disorder; cencer; adenocarcinoma; leukaemia; lymphoma; melanoma; mysloma; sarcoma; anaemia; Crohn's disease; acquired immunodeficiency syndrome; AIDS; Goodpasture's syndrome; inflammation; osteoporosis; thrombocytopaenia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New purified disease detection and treatment molecule proteins and polynucleotides, useful for diagnosing, treating or preventing cancers (e.g. leukemia or sarcoma), anemia, Crohn's disease, AIDS, osteoporosis or hepatitis.
                                      GGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Daffo A, Jones AL, Tran AB, Dahl CR, Gietzen D, Chinn J;
Dufour GE, Hillman JL, Yu JY, Thason O, Yap PE, Amshey SR;
Daugherty SC, Dam TC, Liu TF, Nguyen DA, Kleefeld Y, Gerstin EH;
Peralta CH, David MH, Lewis SA, Chen AJ, Panzer SR, Harris B;
Flores V, Marwaha R, Lo A, Lan RY, Urashka ME;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 240; 339pp + Sequence Listing; English.
                                                                                                                                                                                                                                                         AGAAAAGCACGTAATGAAGGAAGAAACAGAAGAGGCCAACAG 1023
                                                                                                                                                                                                                                                                                           AGAAAAGCACGTAATGAAGGAAGAACAGAAGACGCCAACAG 1191
                                                                                                                                                                                                                                                                                                                                                                                       ABX34679 standard; cDNA; 1281 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    psoriasis; hepatitis; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; 2001US-0279619P.
; 2001US-0280067P.
; 2001US-0280068P.
; 2001US-029180P.
; 2001US-0291829P.
; 2001US-0291849P.
; 2001US-029428P.
; 2001US-029476P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-MAR-2002; 2002WO-US009944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human mddt cDNA SEQ ID 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-FEB-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003-058431/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; ABU11689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200279449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-2001;
20-JUN-2001;
20-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-MAY-2001;
17-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-OCT-2002
                                                                                                          862
                                                                                                                                                                                   922
                                                                                                                                                                                                                       1090
                                                                                                                                                                                                                                                           982
                                                                                                                                                                                                                                                                                                                                                                                                                           ABX34679;
                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                      ABX34679
                                  ઠે
                                                                a
                                                                                                      δ
                                                                                                                                           셤
                                                                                                                                                                                 δ
                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                         ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                        .004 GGAGTGATCAAAAGCGTATTATAGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACCGATTAT 1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1184 GCAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                             GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                            301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                           764 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                            181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACCGATTAT
0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF44669
ID AAF4
XX
XX AAF4
XX AAF4
```

```
TACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTGCAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1005 AAACAGAAGACGCCAACAG 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           625 AAACAGAAGACGCCAACAG 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human MARK3-associated cDNA #37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dobie KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADI29367 standard; cDNA; 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Freier SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-052188/05.
                                                                                                                                                                                   361 AACACT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; ADI29249.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US2003232771-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-DEC-2003
                                 241
                                                                       585
                                                                                                                                                                                                                                                                                                                                                                                                                                                   885
                                                                                                                                                 645
                                                                                                                                                                                                                                                              367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADI29367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ward DT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADI29367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                     qq
                                                                   8
                                                                                                    В
                                                                                                                                               à
                                                                                                                                                                           В
                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence encodes a novel protein kinase. The nucleic acids and the protein kinases they encode may be used in the treatment and diagnosis of diseases associated with inappropriate kinase expression such as immune-related diseases and disorders, cardiovascular disease.

"Complementary sequences may also be used as DNA probes in diagnostic assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Anti-kinase antibodies expression and activity. Diseases related to kinase expression and cardivity. Diseases related to kinase expression and activity. Diseases related to kinase expression and activity include rheumatorid arthrifis, atherosclerosis, autoimmune disorders, camplications of organ transplantation, myocardial infarction, immune disorders, cardiomyopathies, strokes, renal failure, oxidative-stress related disorders, chronic inflammatory bowel disease, chronic inflammatory pelvic disease, multiple sclerosis, asthma, osteoarthritis, periodis, rhinitis, rhinitis, athough especiasis, cancers and reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      i,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acids encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers.
                                     Human, mouse, protein kinase, antiarthritic; antisclerotic, osteopathi immunosuppressive, cardiant, renal, antiinflammatory, antiasthmatic, dermatological, antidiabetic; antiinfertility, gene therapy, vaccine, immune disorder; cardiovasese; neurodegenerative disease; cancer; autoimmune disorder; stroke, inflammatory bowel disease; inflammatory pelvic disease; multiple sclerosis; psoriasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      285 AAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            345 TITCIGICATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 TITCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAAATATTCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAAGCAAGGAATAATCAAGATTTGTGACTTTCGGGTTTGCAAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 TAAGCAAGGAATAATCAAGATTTGTGACTTTGGGGTTTGCACAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 911;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 911 BP; 293 A; 182 C; 178 G; 258 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 537; DB 4; I
Pred. No. 4.4e-133;
                                                                                                                                                                                                                                                                                                                                                                                                          Sudersanam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
       protein kinase cDNA, SEQ ID NO: 49
                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 4; Fig 2; 310pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                        Whyte
                                                                                                                                                                                                                                                                                        26-MAY-2000; 2000WO-US014842.
                                                                                                                                                                                                                                                                                                                             99US-0136503P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 87.0%;
Matches 643; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        Ж,
                                                                                                                                                                                                                                                                                                                                                                                                        Martinez
                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-032161/04.
                                                                                                                                                                                                                                                                                                                                                                 (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             P-PSDB; AAB65642
                                                                                                                                                                                                                 WO200073469-A2
                                                                                                                                                                                                                                                                                                                             28-MAY-1999;
                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                  07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                      Plowman GD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
       Novel
                                                                                                                                                                           Homo
```

ò 셤 ò g ò 셤 ð g

```
644
                                                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                                                                   384
                                                                                                                                                                                                                                                                                                                                                                                                                       824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               624
New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating expression of MARK3 or for treating cancer or Alzheimer's disease.
                                                                                                                                                                                          AAGACTAGTAGAGGAGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        445 AGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAG
                                                                              GACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG
                                                                                                                                                                                                                                                                                                   705 AAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAAATTACAGGAAAATTAATCCCAAG
                                                                                                                                                                                                                                                                                                                                                                   -----AGGAAATTAATCCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            505 GAAGGGTGTCTGAAGATGAATCCAGATGACAGTTAACCTGTTCCCAACTCCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         765 ACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      385 ACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             825 AGACATGGAAACTCTTGAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAP/microtubule affinity-regulating kinase 3; c:
Alzheimer's disease; neurodegenerative disorde;
hyperproliferative disorder; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; ss; antisense gene therapy; MARK3;
```

```
625 AAACAGAAGACGCCAACAG 643
                                                                                              AAD03812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                      AAD03812
                                                                                              The invention relates to a compound comprising a sequence comprising 8-80 base pairs (bp) targeted to a nucleic acid encoding MARK3 (MAP/microtubule affinity-regularing kinase 3), that specifically hybridises with the nucleic acid encoding MARK3 and inhibits expression of MARK3, i.e. is an antisense oligonucleotide (AO). Also included are a composition comprising the compound and a carrier or diluent, inhibiting the expression of MARK3 in cells or tissues, treating an animal having or suspected of having a disease or condition associated with MARK3 and screening for an antisense compound. The antisense oligonucleotide is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            944
                                                                                                                                                                                                                                                                                                                                                                                             TTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     624
                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 GACAGGCCAGCCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            645 AACACTAGTAGAGGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTC 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             384
                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGCACGTAATGAAAGGAAG
                                                                                                                                                                                                                                                                                                                        285 AAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                                                                                                                                                                                                                                                 1 AAATGGAGTTGCTGATGGAGTGATCAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                                                                                                                                                                                                                                                                              TTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receracacearrangraderaceagargeraceagerecreaacrrerreregada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 TACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 AACACT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  705 AAGTGATCCACCTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----AGGAAATTAATCCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 385 ACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGA
                                                                                                                                                  useful for preparing a composition for treating hyperproliferative disorder, particularly cancer and neurodegenerative disease e.g. Alzheimer's disease. The present sequence is a MARK3 associated CDNA included in the figures but not mentioned anywhere else in the
                                                                                                                                                                                                                                                                                             96; Gaps
                                                                                                                                                                                                                                                             Query Match 51.6%; Score 537; DB 12; Length 911; Best Local Similarity 87.0%; Pred. No. 4.4e-133; Matches 643; Conservative 0; Mismatches 0; Indels 96
                                                                                                                                                                                                                                    Sequence 911 BP; 293 A; 182 C; 178 G; 258 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1005 AAACAGAAGACGCCAACAG 1023
Disclosure; Fig 2; 233pp; English
                                                                                                                                                                                                             specification.
                                                                                                                                                                                                                                                                                                                                                                              345 '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 505
                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            945
                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        565
 셤
                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                     ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

```
The present sequence is a cDNA encoding novel human protein (NHP) known as human kinases. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled the probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bloor body. Nucleotide constructs encoding functional NHPs are used in gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        continuous supply of NHP to the functional as continuous supply of NHP to the functional NHPs are used in gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product= "Human kinase #1"
/note= "The coding region does not include stop codon"
/partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated human kinase polynucleotide useful for generating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.7%; Score 454.4; DB 4; Length 561; 99.8%; Pred. No. 4.3e-111; ive 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Turner CA, Nehls M, Friedrich G, Zambrowicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 561 BP; 189 A; 87 C; 112 G; 173 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                             Human; kinase; gene therapy; bioreactor; mental disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 27; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0156511P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2000; 2000WO-US026621.
AAD03812 standard; cDNA; 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ø
                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .561
                                                                                                                                                                                                                                                                                                                               biological disorder; ss
                                                                                                                                                                                                                    Human kinase cDNA #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-266166/27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAE00490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200123579-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                           ното варіепв
                                                                                                                                                19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Donoho G,
Sands AT;
```

1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60 	61 IGCAGAAACAAACCCTGGACAAGTAGTGGTGTTAAAAAATTTGTGGAATCTGAAGAT 120 	121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 	181 CCAAATCTIGIGAACCTCATCGAGGIGITTCAGGAGAAAAGGAAAATGCATTTAGTTTTT 240 	241 GAATACTGTGATCATACATTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGAT 300 	301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360 	361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAAGG	421 AAGAITTGTGACTTCGGGTTTGCACAAATTCTGATT 456 
ò a	λ Q Q	Oy 11:	Qy 18	Oy 24	Qy 3(	Qy 36	Oy 42 Db 42

Search completed: April 21, 2005, 21:13:01 Job time : 582.772 secs

AX107718 Sequence AX05465 Sequence BC079506 Danio rer CQ714922 Sequence X6559 H. sapiens m AX399975 Sequence CQ492706 Sequence AX112442 Ciona int BC081896 Rattus no AR211995 Sequence AR211995 Sequence AR211996 Sequence AR211996 Sequence AR211997 Sequence AR211997 Sequence AR211997 Sequence AR211997 Sequence AR211997 Sequence AR211997 Sequence AR211997 Sequence AR211997 Sequence ABC29045 Mus muscu CQ588387 Sequence U35146 Homo sapien BC074132 Xenopus 1 BX932070 Gallus ga CQ115553 Sequence

```
1 (bases 1 to 1041)
Donoho, G., Turner, C.A. Jr., Nehls, M.C., Friedrich, G., Zambrowicz, B. and Sands, A.T.
Human kinase proteins and polynucleotides encoding the same Patent: US 6716616-A 9 06-APR-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 1041; DB 6; Best Local Similarity 100.0%; Pred. No. 2.7e-243; Matches 1041; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                           ALIGNMENTS
                                                                                                                                                                                                                                                              Sequence 9 from patent US 6716616.
                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .1041
/organism="unknown"
/mol_type="genomic DNA"
                                                                                            AR221994
AR438688
AB029045
AB029067
                                                                                                                            BC083590
AB029066
AB029065
                                                                             AR221995
AR438689
                                                                                                                                                            HSU35146
BC074132
BX932070
CR407462
CQ715653
AF130372
               AX803417
BC079506
CQ714922
HSSTHPKB
AX399975
CQ492706
AK112442
                                                                       BC081896
                                                                                                                                                   CQ588387
                                                                                                                                                                                                                                                                                        AR492169.1 GI:47260679
                                                                                                                     0000
Unclassified.
.
Unknown.
                                                                                                                                                                                                                                                                                                                 Unknown
454.4
453.2
395.3
395.8
360.8
343.8
343.8
343.8
342.8
342.8
251.8
251.8
251.8
251.8
251.8
                                                                                                                            243.8
243.8
243.8
242.2
241.2
237.4
218.8
202.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                 RESULT 1
AR492169
LOCUS
                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   硆
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                     April 21, 2005, 20:25:49 ; Search time 4527.25 Seconds (without alignments) 11141.838 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                      1 atggaaaagtatgaaaaatt......aggtacttccgctcaaaagt 1041
                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                      AR492169
AR407120
AR407169
AR107720
AR492170
AR492170
AR492170
AR492167
AR492167
AR107712
AR286069
AR286069
AR286069
AR286069
AR286069
AR286069
AR286069
AR286069
AR286069
AR286069
AR286069
AR492165
AR492165
       GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                             4708233 segs, 24227607955 residues
                                      OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX698820
AX166534
AR492171
                                                                                                                                                                                                                                                                                                                                                                                                                                              AX107720
AR492166
AX107714
AR492170
AX107722
AR492167
AX107716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX107724
AX286069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX286067
AX056404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX107712
AR492168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR492165
                                                                                                                     IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                            seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                   US-10-766-691-9
1041
                                                                                                                                                                                                                                        9b ba: *
9b htg: *
9b ov: *
9b ov: *
9b ov: *
9b pat: *
9b pr: *
9b re: *
9b re: *
9b ov: *
                                                                                                                                                                                                                                                                                                                                                                                                       %
Query
Match Length D
                                                                                                                                                                                                                                                                                                                                                                                                                                       1041
1041
1068
1068
945
972
1790
1678
11819
1819
687
882
                                                                                                                                                                                                                                   GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                       5:
6:
7:
9:
10:
12:
13:
                                                                                             Perfect score:
                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                       1041
1025
1025
1025
839
839
823
823
823
762.8
709
709
709
745.6
645.6
645.6
645.4
454.4
                                                                                                                                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                           Minimum DB 8
Maximum DB 6
                                                                                                      Sequence:
                                                                                                                                             Searched:
                                                                                                                                                                                                                                   Database
                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                               Result
No.
```

PAT 15-MAY-2004

linear

ö

Gaps

. 0

0; Indels

Length 1041;

9

FEATURES Location/Qualifiers  1. 1041   / 1041	Query Match 100.0%; Score 1041; DB 6; Length 1041; Best Local Similarity 100.0%; Pred. No. 2.7e-243; Matches 1041; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	ratgaaaattagctaagactggagaagggtcttatggggttgtat 	QY 61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120 Db 61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGTAGTAAAAAAATTTGTGGAATCTGAAGAT 120	Qy 121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180	QY         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT 240           Db         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAAGGAAAATGCATTTAGTTTTT 240	Oy 241 GAATACHGTGATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGAT 300	Qy 301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360	QY         361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAATAATC 420           DD         361 AACTGTATTCACAGAGATATAAAAACCTGAAAAATATTCTAATAACTAAGGAATAATC 420	T 48	Qy 481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540 	Qy 541 TCAGTCGATATATGGCTATTGGTTTTTGCAGAGCTCCTGACAGCCACTG 600	Oy 601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660	
	OY 361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAGTAAG	OY 421 AAGATTIGTGACTICGGGTTIGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480	Qy 481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540	OY 541 TCAGTGGATATATGGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGCCA	Oy 601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 660 	Qy     661     GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC     720       Db     661     GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC     720	Qy 721 GTAGCCTCTCAAAGTGCTGGAATTACAGGAAATTAATCCCAAGACATCAATCA	QY 781 AAAAGTAACGGGTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT 840	Qy 841 GAGGAAAAGTTCTCAGATGTTCATCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 900 	OY 901 ATGAATCCAGATGACAATTAACCTGTTCCCAACTCCTGGACAGCTCCTTACTTTGATTCT 960	QY 961 TTTCAACAGGCCCAAATTAAAAGAAAAGCTAATGAAGGAAG	Oy 1021 CAGGTACTTCCGCTCAAAAGT 1041	AX107720 LOCUS LOCUS LOCUS LOCUS Sequence 9 from Patent W00123579.  AX107720. AX107720

	Qy         721         GTAGCCTCTCAAAGTGCTGGAAAATTAATCCCCAAGACATCAATCA	Oy 1021 CAGGT 1025        Db 1021 CAGGT 1025	, E	REFERENCE 1 AUTHORS Donoho, G., Turner, C.A., Nehls, M., Friedrich, G., Zambrowicz, B. and Sands, A.T. TITLE Human kinase proteins and polynucleotides encoding the same JOURNAL Patent: WO 0123579-A 3 05-APR-2001, Lexicon Genetics Incorporated (US) FEATURES Location/Qualifiers source /organism="Homo sapiens" //mol_type="unassigned DNA" //db_xref="taxon:9606"	Query Matc Best Local Matches 10	
Db         901         ATGAATCCAGATGACTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT         960           Qy         961         TTTCAAGAGGCCCAAATTAAAAGAAAAGCACGTAATGAAGGAAG	RESULT 3 AA492166 LOCUS LOCUS ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166 ACCESSION AR492166	Query Match 98.5%; Score 1025; DB 6; Length 1068; Best Local Similarity 100.0%; Pred. No. 2.2e-239; Matches 1025; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	Qy         1 ATGGADAAGTATGAADAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60           Db         1 ATGGADAAGTATGAADAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60           Qy         61 TGCAGAAACAAAAAAAAGTAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120           Db         61 TGCAGAAACAAAAAAAAAAAGGACAAGTAGTAGTGTTAAAAAATTTGTGGAATCTGAAGAT 120           Qy         121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATAGGAATTTGAAGCAATTAAAAACAT 180           Db         121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATAGCAATTAAAAACAT 180	Qy         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAATGCATTTAGTTTTT 240           Db         181 CCAAATCTTGTGAACCTCATCGAGGAGAAAAGGAAAATGCATTTAGTTTTT 240           Qy         241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGGAAACCCAAATGGAGTTGCTGAT 300           Db         241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC	DD 421 AGGATTGIGACTTGGGGTTTGCACAAATTCTAGTGGGAGATGCCTACACCAATTAT 480  QY 481 GTAGCTACGACATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540  L

Unclassified.  AUTHORS 1 (bases 1 to 945)  AUTHORS Donoho, G., Turner, C.A. Jr., Nehls, M.C., Friedrich, G., Zambrowicz, B. and Sands, A.T.  TITLE Human kinase proteins and polynucleotides encoding the same JOURNAL Parent: US 6716616-A 11 06-APR-2004;  FRATURES 1. 945    Location/Qualifiers   1. 945   Author   1. 945   1. 945   1. 945   1. 945     Organism="unknown"	Query Match Best Local Similarity 90.8%; Pred. No. 5.1e-194; Matches 945; Conservative 0; Mismatches 0; Indels 96; Gaps 1;  Qy 1 ATGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60		H-H H-H U-	Db   361   AACTGTATTCACAGAGATATAAACCTGAAAATTCTAATAACTAAGGAAGG	   Db   651
	301 GGAGTGATTCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATAATACATTTCTGTCATAATACATTTCTGTCATAATACATTTCTGTCATAATACATTTCTGTCATAAAACATTTCTGTCATAATACATTTCTGTCATATACATTTCTGTCATAATACATTTCTGTCATAAAACATAACATACAT	481 GTAGCTACGAGATGCTACCCTGAACTTCTTGTGGAGATGCCTACCGATTAT  481 GTAGCTACGAGATGGTACCCAGCTCCTGAACTTCTTGTGGAGATACTCAGTATGGTTCT  481 GTAGCTACGAATGGTACCGAGCTCCTGAACTTCTTGTGGAGATACTCAGTATGGTTCT  541 GTAGCTACATATAGGGCTATTGGTTTTTTTGCAGAGAGTCCTGACAGCCAGC			 8492170 equence 11 8492170 8492170.1 nknown.

```
SAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       684
                                                                                                                                                                          AAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                  NAAAGTATGAAAAATTAGCTAAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                    TGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                      .TCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                    CTGTGATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                     GATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -------AGGAAATTAATCCCAAGACATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACGATGGAAACTCTT
96;
                                                                                                 80.6%; Score 839; DB 6; Length 945; arity 90.8%; Pred. No. 5.1e-194; onservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

and

PAT 30-APR-2001

linear

DNA

```
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                       Homo sapiens (human)
    AX107716
AX107716.1
                              Homo sapiens
                                                                                                                                                                                                            121
                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                              601
    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                            source
                                                                 TITLE
JOURNAL
                                                      AUTHORS
                                                REFERENCE
                                                                                     FEATURES
                                                                                                                    ORIGIN
                                                                                                                                                         à
                                                                                                                                                                     셤
                                                                                                                                                                                             g
                                                                                                                                                                                  ò
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                      D
                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                120
                            180
                                        180
                                                     240
                                                                 240
                                                                             300
                                                                                         300
                                                                                                  GGAGTGATCAAAAGGGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                           420
                                                                                                         AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                       480
                                                                                                                                                                                 540
                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                          900
                                                                                                                                                                                                                                               650
                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                  999
                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                        650
                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                 684
                                                                                                                                                                                                                                                                                                                         744
                                                                                                                                                                                                                                                                                                                                                  804
                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                    924
      GATCCTGTTGTTAAGAAAATAGCACTAAGAAAATACGTATGTTGAAGCAATTAAAACAT
                                GATCCTGTTGTTAAGAAAATAGCACTAAGAAAATACGTATGTTGAAGCAATTAAAACAT
                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                    TCAGTCGATAIATGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGGCCACTG
                                                                                                                                                                             GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                             TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                        GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                781 AAAAGTAACGGGTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                           -----AGGAAATTAATCCCAAGACATCAATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                           ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                       1021 CAGGT 1025
                                                                                                                                                                                                                                                                                                                                                                                                                           929
                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGT
                                    121
61
            61
                         121
                                                 181
                                                                                                                                                                421
                                                                         241
                                                                                                  301
                                                                                                               301
                                                                                                                           361
                                                                                                                                        361
                                                                                                                                                     421
                                                                                                                                                                                          481
                                                                                                                                                                              481
                                                                                                                                                                                                       541
                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                     651
                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                             651
                                                                                                                                                                                                                                                                                                                      685
                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                            901
        a
                                 q
ò
                       δ
                                                à
                                                          g
                                                                        ò
                                                                                  g
                                                                                                 ò
                                                                                                           g
                                                                                                                        ò
                                                                                                                                      g
                                                                                                                                                    ò
                                                                                                                                                              a
                                                                                                                                                                                         g
                                                                                                                                                                            à
                                                                                                                                                                                                     à
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                            à
```

```
120
                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAAATTAGCTAAAGACTGGAGAAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                     1 Arggaaaagrargaaaarragcraagacrggagaagggrcrrargggarrgrarrcaaa
                                                                                                                                                                                                                                                                                                 61 IGCAGAAACAAAACCICTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                  61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAAATCTGGAAGAT
                                                                                                                                                                                                                                                                                                                                                           GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGGTCTTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                    CCAAAICTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                   AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Donoho,G., Turner,C.A., Nehls,M., Friedrich,G., Zambrowicz,B. Sands,A.T.
Human kinase proteins and polymucleotides encoding the same batent: MO 0123579-A 5 05-APR-2001;
Lexicon Genetics Incorporated (US)
Location/Qualifiers
1.972
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                 96;
                                                                                                                                                                                     Length 972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resceresanarcasarcresacererrarcresanarcasacace
                                                                                                                                                                                                               Indels
                                                                                                                                                                                Score 823; DB 6;
Pred. No. 4.1e-190;
0; Mismatches 0;
                                                                                                                                                                           Query Match
Best Local Similarity 90.6%;
Matches 929; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
```

Qy         241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAAGGAATGGTGCTGAT 300           Db         479 GAATACTGTGATCATACACTTTTTAAATGAGCTGGAAAAGCAATGGAGTTGCTGAT 538           Qy         301 GGAGTGATCAAAAGCGTATTATGAGCTGGAAAGCCTAAATTTCTGTCATATACAT 360           Db         539 GGAGTGATTCAAGAGTATAAAACCTGAAAATATTCTGTCATAAATACT 598           Qy         361 AACTGTATTCACAGAGATATAAAACCTGAAAATATCTGATAAATACTAAGCAAGGAATAATC 420           Db         599 AACTGTATTCACAGAGATATAAAACCTGAAAATATCTGAAGCAAGGAATAATC 658           Qy         421 AAGATTTGTGACTTCGGGGTTTGCACAAATTCTGATTCCAGGAGATGCTAAT 480           Db         659 AAGATTTGTGACTTCGGGTTTTGCACAAATTCTGATTCCAGGAGATGCTAATA 718           Qy         481 GTAGCTACGAGGTTTGCACAAATTCTGATTCCAGGAGATGCTACACCGATTAT 718           Qy         659 AAGATTTGTGACTTCGGGTTTTGCACAAATTCTGTGGGAGATACTCAGTATTTT 718           Qy         671 GTAGCTACGAGGTTCCTGAACTTCTTGTGGGAGATACTCAGTATTTTTTTT	Qy         601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGAC         660           By         661 GGCTTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT	Db 1103 TTTCAGAGGCCCAAATTAAAAGAAAGCACGTAATGAAGGAAG	RESULT 10 AX698820 LOCUS AX698820 AX69820 AX69820 AX698820 AX69820 AX698820
	AX746179 LOCUS DEPINITION Sequence 30 from Patent W00208399.  DEFINITION Sequence 30 from Patent W00208399.  MA746179 Sequence 30 from Patent W00208399.  MA746179 MA74617 MA7461	ORIGIN ORIGIN  OLOETY Match  Best Local Similarity 90.6%; Pred. No. 1.38-189;  Matches 927; Conservative 0; Mismatches 0; Indels 96; Gaps 1;	ATGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60

PAT 22-JUN-2001

ω

```
Plowman, G.D., Whyte, D., Manning, G.S., Sudarsanam, S.S., Martinez, R., Flanagan, P. and Clary, D.S.
Novel human protein kinases and protein kinase-like enzymes
Patent: W0 0138503-A 25 31-MAY-2001;
Sugen, Inc. (US)
          CTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCCATGAAGGGGTGTC 934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 TGCAGAAACAAAACCTCTGGACAAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAGAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 72.7%; Score 757; DB 6; L
Best Local Similarity 86.1%; Pred. No. 5.1e-174;
Matches 927; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                    1. .1083
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                     AX166534 1083 bp
Sequence 25 from Patent W00138503.
AX166534
AX166534.1 GI:14546879
                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                   GCCAACAG 1023
                                                                                                                                                         GCCAACAG 1062
          875
                                    968
                                                                                                                                                         1055
                                                                                   926
                                                                                                                                  1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                           RESULT 11
AX166534
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                       PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                    g
                                 ŏ
                                                                                 à
                                                                                                        셤
                                                                                                                                 à
                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                    TGCAGA-AACAAAACCTCTGGACAAGTAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGA 119
                                                                                                                                                                                                     370
                                                                                                                                                                                                                                                    TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTA-TGTTGAAGCAATTAAAAC 178
                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                                                                                          238
                                                                                                                                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                                                                                                                                430
                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      611 AIGTAGCIAGCGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCCAGTATG 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAGC 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      775
                                                                                                                                                                                    ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                  ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               359 ATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATAACTGTATTCACAGAGATATAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGTAGCTA-CGAGATGGTACCGAGCT-CCTGAACTTGTTGGGGAGATACT-CAGTATG
                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GITCTTCAGTCGATATATGGGCTATTGGTGTTTTTGCAGAGCTCCTGACAGGCCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                656 AGACGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGACTCTGAACTTCATGAAGGGGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              716 CTGCCGTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAAGACATCAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             776 TCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACTGTGGCCTTGAAATCAGATGTGGACCAACTTTATCTGTTATCAGAACACT----
                                                                                                                                   Query Match
73.3%; Score 762.8; DB 6; Length 1678;
Best Local Similarity 90.0%; Pred. No. 2e-175;
Matches 925; Conservative 0; Mismatches 2; Indels 101;
                                               1. 1678 | / Organism="Homo sapiens" | / Organism="Homo sapiens" | / Mol_type="unassigned DNA" | / db_xref="taxon:5606" | / note="Incyte ID No: LI:058298.1:2001JAN12"
Molecules for diagnostics and therapeutics
Patent: WO 02079473-A 6 10-OCT-2002;
Incyte Genomics, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                           251
                                                                                                                                                                                                                                                                                                                                   179
                                                                                                                                                                                                                                                                                                                                                           311
                                                                                                                                                                                                                                                                                                                                                                                                          371
                                                                                                                                                                                                                                                                                                                                                                                                                                                         431
                                                                                                                                                                                                                                                                                                                                                                                  239
                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              836
                                                  source
TITLE
JOURNAL
                                     FEATURES
                                                                                                            ORIGIN
                                                                                                                                                                                                        g
                                                                                                                                                                                                                                8 8
                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

120

9 9

150;

180 180 240 240 300 300 360 420

Db   558 AAGATTTGTGACTTTGCACAAATTCTGAGTTGGACTTCTTCTCTGGTGCC 617	454  798 AGCACCGTGCCCAGCCAGATTTTCAAACAATACTACTGAGAGCTCACAGAGTGTTT 454  455	1158 CTGCCGTAGCCTCTAAAGTGCTGTATTAATGCGAAAATTAATCCCAAGACATCAATCA	AK286059 AX286069 687 bp DNA linear PAT 20-NOV-2001 LOCUS DEFINITION Sequence 3 from Patent WO0179488. ACCESSION AX286069 GI:17045995 VERSION AX286069.1 GI:17045995 KEYWORDS COURCE Homo sapiens (human) ORGANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Euteleostomi;
Db	from Patent W00123579.  GI:13923203  g (human)  g (human)  Metazoa; Chordata; Craniata; utheria; Primates; Catarrhini Turner, C.A., Nehls,M., Friedr  e proteins and polynucleotide 0123579-A 13 05-ApR-2001; efics Incorporated (US) cation/Qualifiers rganism="Homo sapiens" 0-1219pe="unassigned DNA" 0-127pe="unassigned DNA" 0-127pe="unassigned DNA" 0-2xref="taxon:9606"		438 GGAGTGATCAAAAGGGTATTATGGGAAACACTTCAAGTTTCTGTCATATACATTTCTGTCATATACATTTCTGTCATATACATTTCTGTCATATACATTTCTGTCATATACATTTCTGTCATATACATTTCTGTCATATACATTTCTGTCATATACATTTCTGTTACATTTCTGTTACATTCTGTTACATTCTGTATACTTACATACA

```
1
Kapeller-Libermann,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                        189
                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                         309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                               source
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                   FEATURES
                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                          ठ
                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-NOV-2001
                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                  9
                                                                                                                                                                                           1 ATGGGAAAGTATGAAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                      TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                        CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                  AAGATTIGIGACTTCGGGTTTGCAAATTCTGATTCCAGGAGATGCCTACACGGTTAT
                                                                                                                                                                            ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                           TGCAGAAACAAAACCTCTGGACAAGTAGTTAGTTAAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                            GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                    AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT
                                                                                                                                                         ö
                                                                                                                                    Length 687;
                Kapeller-Libermann, R.
14557, protein kinase molecules and uses therefor Patent: WO 0179488-A 3 25-CT-2001;
Millennium Pharmaceuticals, Inc. (US)
Location/Qualifiers
1. 687
/ organism="Homo sapiens"
//mol_type="unassigned DNA"
//db_xref="taxon:9606"
                                                                                                                                                        Indels
                                                                                                                                  Score 645.6; DB 6;
Pred. No. 7.7e-147;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX286067 882 bp
Sequence 1 from Patent W00179488.
AX286067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX286067.1 GI:17045993
                                                                                                                                  / Match 62.0%;
Local Similarity 99.4%;
nes 648; Conservative 0
                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
AX286067
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                        Matches
                             TITLE
JOURNAL
         REFERENCE
                     AUTHORS
                                                           FEATURES
                                                                                                               ORIGIN
                                                                                                                                                                              ઠે
                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                       ઢ
                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                          8
```

```
/protein_id="Cad12176.1"
/db_xref="G1:17045994"
/db_xref="G1:17045994"
/translation="MGKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPIV
KKIALREIRUKQLKHPNUNLIEVFRKROHLVFEYCDHALLNELERNPNGVADGY
IKSVLWQTLQALNFGTHNCTHRDVREDNIJTKQGIIKICDFGFAQILIPGDAYTDY
VATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGGAAAGTATGAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249 GATCCTATTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGGAATTAAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    369 GAATACTGTGTGTTGTATTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       429 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACTGTATTCACAGAGATGTAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         669 TCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGTGATCAAAAGCGTATTATGGCAAACACTTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGATTTGTGACTTCGGGTTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gradcracdadardcraccadcracradadcrrcrrgraddadaracrcagrardcrrcr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              882;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 62.0%; Score 645.6; DB 6; Best Local Similarity 99.4%; Pred. No. 7.7e-147; Matches 648; Conservative 0; Mismatches 4;
14257, protein Kinase molecules and uses Patent: WO 0179488-A 1 25-OCT-2001; Millennium Pharmaceuticals, Inc. (US) 1...882
                                                                                                                                                                                                 129. .815
/note="unnamed protein product"
/codon_start=1
                                                                                                                          /organism="Homo sapiens"
/mol type="unassigned DNA"
/db_xref="taxon:9606"
129-..815
                                                                                                                                                                                                                                                                                                                                                                                                                                  MNCILWQQSC"
```

Search completed: April 21, 2005, 23:37:10 Job time : 4539.25 secs

us-10-766-691-9.rge

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CB169554 RUC603000
BY733578 BY733578
AK016781 Mus muscu
CB315094 AGENCOURT
BUG86325 UI-CF-DUI
BY72739 BY752739
AL38596 ml34h09.Y
BU221831 603750354
CK482747 AGENCOURT
AA061797 ml34h09.r
AR086182 AV986182
CK472415 AGENCOURT
BRO16186 BP016186
AY333681 Rattus no
CB400506 OSTF177F1
                                                                                                                                   April 21, 2005, 20:26:40 ; Search time 3019.15 Seconds (without alignments) 11914.206 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus muscu
BB160006A
BX304025
Pan trogl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    um32d03.y
NISC_1t01
vc33b05.r
OST128128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ното варі
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                   1 atggaaaagtatgaaaaatt.......aggtacttccgctcaaaagt 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY733578

AK016781

BU752739

BY752739

BY752739

BY752739

BY752739

BY752739

BY752739

BY752739

BY752739

BY752739

CK482747

AV861787

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK477415

CK4774
                                                                                                                                                                                                                                                                                                                                                                                                                                                  68479088
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                   34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                          OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CB169554
BY73378
BY73378
BY73378
BY73378
BY73378
BY786325
BY786325
BY786325
BY786325
BY786325
BY786325
BY786325
BY787240
AY38361
CB400506
AY312140
AW106692
CA334838
CG538295
                                                                                                                                                                                                                                                                                                                          IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                             US-10-766-691-11
945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_est1:*
gb_est2:*;
gb_est4:*;
gb_est4:*;
gb_est6:*;
gb_gs81:*
                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3333.6
319.4
316.8
316.8
306.8
296.2
289.2
275.8
269.8
269.8
2269.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     255
252
250.6
249
247.8
242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             390.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ••
                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U
```

AV960213 AV960213 CK537628 AGENCOURT CK597959 AGENCOURT BU377342 603812152 BU370363 603142234 CN215899 WLA10560 BW110560 BW110560 AK090045 Wus muscu AK045036 Mus muscu AK046394 Mus muscu AK046394 Mus muscu AK046394 Mus muscu CB955302 AGENCOURT CB757579 AMGNNUC:N BJ000534 BJ000534 BW36241 BW336241 AK078804 Mus muscu BW716459 BY716459 BP716459 BY716459	HENTS	op mRNA linear EST 30-JAN-2003 tes Bos taurus CDNA, mRNA sequence.	1) 171, College Station, TX 77843-2471,	s" b testes" y Vector: pBluescript SK+; Site_1: bequence 5' of the insert	GCCAATTGGAGCTCCACCGCGTGGCCGCGCGCTCGAG. Sequence 3' of the inserts (AAGAATTCGATATCAAGCTTATCGATACCATCGACTCGAG. normalized Rd 1 library, sequenced 3' with M13R primer."	re 480.6; DB 6; Length 695; dl. No. 1.8e-111; Mismatches 39; Indels 0; Gaps 0;	atggadagtatgadadattagctaagactggagagggtcttatggggttgtattcada 60 
AV960213 CK237628 CK3537628 CK3537628 EW120363 CK25589 BW110569 AX090045 AX06099 AX045356 AX045356 AX045356 AX07689 AX078894 BW336241 BW336241 BW336241 BW3764899 BC00538154	ALIGNMENTS	695 bp mRN CSEQFXN20 testes Bos t 8155681 coa, Chordata, Craniata ia; Cetartiodactyla, R	l, C.A. and Gil elson Genetics	9798452616 9798456970 .: david.adelson@tamu.edu. Location/Qualifiers 1. 695 /organism="Bos taurus" /mol_type="mRNA" /db_xref="taxon:9913" /tissue type="restes" /clone_lib="CSEQFXN2O to" /note="Organ: testes; V Note:"Organ: testes; V Not!; Site_2: ECOR!; see (5'-NNN.	CTCCACCGCGGT (AAGAATTCGA Rd 1 library	Sco Pre 0;	TTAGCTAAG          TTAGCTAAG
0 C C C C C C C C C C C C C C C C C C C		:SEQ 3155 31,	trak ori	lson 1/Qu 3m=" be=" typ typ Lib= lite_	GGAG erts zed	90 80	\$=\$ \$=\$
48 47 48 48 48 48 48 48 48 48 48 48 48 48 48		752.R1 CSEQ 1 GI:28155 8 (COW) 8 Metazoa;	es 100.  m,D.L. and Gil. m,D.L. and Gil. ESTB (Adelson ished (2003) t: David L. Add Breeding and C. A&M University Science Dept.	152616 16.36970 16.3delson@tan 16.3delson@tan 16.3delson@tan 16.3delson@tan 16.3delson@tan 16.3delson 16.3dels	GCGAATTGGA the insert normalized	50.9%; ilarity 92.8%; Conservative	GTATGA/        GTATGA/
88888888888888888888888888888888888888		0	A T H H B G	9798 9798 1: da	មួមជួ	Similarity 4; Conser	rggaaaa         rggagaa
23 23 23 23 23 23 23 23 23 23 23 23 23 2				USA TOS: Fax: Emai: Ce		al 50	1 A: 
0 2022222 2022222222222222222222222222		RESULT 1 CB169554/c LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM	REFERENCE AUTHORS TITLE JOURNAL COMMENT	FEATURES	ORIGIN	Query Ma Best Loc Matches	S G
							<u> </u>

d à 셤 ò g ò g 셤

ò

유

ò 용 8

ò

음

```
450; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                           MEDLINE
PUBMED
                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

2 (bases 1 to 670)

3 (bases 1 to 670)

3 (bases 1 to 670)

4 (bases 1 to 670)

4 (bases 1 to 670)

5 (bases 1 to 670)

5 (bases 1 to 670)

6 (bases 1 to 670)

6 (bases 1 to 670)

7 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

8 (bases 1 to 670)

9 (bases 1 to 670)

9 (bases 1 to 670)

9 (bases 1 to 670)

9 (bases 1 to 670)

9 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bases 1 to 670)

1 (bas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear EST 17-DEC-2002
                                                                                                                               180
                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                 424
                                                                                                                                                             CCAAAICTIGIGAACCICATIGAGGIGITCAGGAGAAAGAGAAAAIGCAITITAGICTIT 304
                                                                                                                                                                                                                                                                                                                                                                               244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183 AATTGTATTCACAGAGATGTAAAACCTGAAATATTCTAATAACTAAGCAAGGAATAATC 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY733578
BY733578 RIKEN full-length enriched, 16 days neonate male diencephalon Mus musculus CDNA clone G630052E12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata, Vertebrata, Euteleostomi,
Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123 AAGATCTGTGACTTTGGGTTTGCACGAATTCTGATTCCAGGAGATGCCTACACTGACTAC 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                      GTCGCTACAAGATGGTACCGAGCTCCCGACCTTCTTGTGGGGGATACCCAGTATGTTCT
                                                           483 TGCAGAAACAAACCTCGGGACAAGTGGTAGCTATTAAAAATTTGTGGAATCCGAAGAT
                                                                                                                            GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACAT
                                                                                                                                                                                                                                                      181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243 GGAGTGATCAAAAGTGTTATGGCAAACACTCCAAGCTCTCAACTTCTGTCATAAACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY733578
BY733578.1 GI:27146705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCA 543
61
                                                                                                                         121
                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY733578
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
```

```
Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinaqawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,B.S., Rogers,J., Birney,E. and Hayashizaki,Y.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                 Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9216
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
RIKBN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 145 ATGGAAAAGTATGAAAAGCTAGCTAAGATCGGAGAAGGGTCTTATGGCGTTGTATTCAAG 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GATCCTGTTGATAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCGTGTCGTTAGGAAAATAGCCCTGCGGGAAATCCGTATGCTGAAGCAGTTGAAACAC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: genome_res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P.,
Yukuda,S., Hashizume,W., Hayashida,K., Hizozane,T., Horti,F.,
Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Kawai,J., Kojima,Y.,
Kondo,S., Konno,H., Koya,S., Miyazaki,A., Murata,M., Nakamura,M.,
Nomura,K., Numazaki,R., Ohno,M., Ohsato,N., Saito,R., Sakazume,N.
Sano,H., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami,M.,
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_st_gg="16 days neonate"
/clone_lib="RIKEN full-length enriched, 16 days neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGAAACAAATCTTCTGGACAAGTAGTAGCGATCAAAAAATTCGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prepare mouse tissues.
Please visit our web site (http://genome.gsc.riken.go.jp)
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 670;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42.9%; Score 405; DB 6;
85.6%; Pred. No. 3.5e-92;
iive 0; Mismatches 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'tissue_type="diencephalon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="G630052E12"
                                                                                                                                                                                                                                                                                                                                                            Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            male diencephalon"
                                                                                                                                                                                                                                              Nature 420, 563-573 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sex="male"
```

g

g ò 셤

8

용

8

셤 8 임

ઠે

```
/trānslation="MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKRFLETEDDPVI
KRAIARBINALKQLKHPNIVNLLEVERKRRHLHTVTHELDRYGKGVPEPL
VKNITWQTLQAVNFCHKHNCIHRDVKPENILITKGSAIKLCPFGFARLLTGFGDYTD
YVATRWYRSPELLVGDTQYGPPVDVWAIGCVFAELLSGVPLWPGKSDVDQLYLIRKT
BOLIPRHQOYFSNQYFSGYKIPDPEDMETLELKFPNISYSALGFLKGCLHMDPAERL
TCEQLLQHPYFDSIRGGLTRQHDKPARTIRQSRKHLTGLQYLPGLTSSRILPALD
NKKYHGSTKRFNYHFPNI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="testis"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Please visit our web site (http://genome.gsc.riken.jp/) for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="unnamed protein product; cyclin-dependent
kinase-like 1 (CDC2-related kinase) (MGD|MGI:1918341)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42.5%; Score 401.8; DB 3; Length 1691; 66.9%; Pred. No. 2.7e-91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 2.7e-91;
0; Mismatches 287; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="FANTOM_DB:4933411017"
/db_xref="taxon:10090"
/clone="4933411017"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="BAC25497.1"
/db_xref="G1:26382418"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 66.9
Matches 587; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                details
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bource
                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                              JOURNAL
                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, B., Watsuhiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HTC 03-APR-2004
                                                                                    300
                                                                                                         GGAGTGATTAAAAGTGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCAC 504
                                                                                                                                                                                                                                                                384
                                                                                                                                                               GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                          361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                     421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                           624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The RIKEN Genome Exploration Research Group Phase II Team and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AK016781

Mus musculus adult male testis cDNA, RIKEN full-length enriched library, clone:4933411017 product:cyclin-dependent kinase-like 1 (CDC2-related kinase), full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The FANTOM Consortium and the RIKEN Genome Exploration Research
                                              325 CCAAACCTCGTGAACCTCATCGAGGTGTTCAGAAGAAAAGAGAAAGATGCATCTAGTTTTT
                                                                                                                                                                                                                                                                                                                                             Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                        GTTGCCACCAGGTGGTACCGAGCCCNCGAACTTCTCGTGGGAGACA 670
                                                                                                                                                                                                                                                                                                                                                                                                 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATA 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci, P. and Hayashizaki, Y.
High efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
9927923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Group Phase I & II Team.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AK016781.1 GI:12855701
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FANTOM Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK016781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11076861
                                                                                                                         385
                                                                                                                                                               301
                                                                                                                                                                                                   445
                                                                                                                                                                                                                                                                              505
                                                                                                                                                                                                                                                                                                                                                           565
                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
AK016781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
```

61

ò

셤

121 297 181 357 241 417

ò

원

ò g ò 셤 à g ò g à g 8 셤 ò g ð g ð g

361

421

478 657 538 717 298 111 658 718

ద

778

셤 à

838

RESULT 4 CB315094 LOCUS DEFINITION

VERSION KEYWORDS SOURCE ORGANISM ACCESSION

```
þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    276 rereredacararedecrererererrirrecagaecrereacegereagecaere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840 CCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGCACGTAA 899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (where B = A, C, or G and N = A, C, G, or T).

insert size 1.23 kb (range 0.5-4.0 kb). 15/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA)."
          1 (bases 1 to 825)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           216 Grigccaccaderedracceaecccricaacricricreseeaeacaceaeracecric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     336 rescenseanantensareresacenerrinarerearearenessanarea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           396 ATCCCAAGGCATCAGTCTATAAAAGTAACCAGTTTTTCCGTGGCATCAGCATACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACTITCAIG-AAGGGGIGTCTGAAGAIGAATCCAGAIGACAGAITAACCTGTICCCAACI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  516 AGTTTCATGAAANGGGTGTCTGAAGATGGATCCTGATGAGAGGCTGACCTGTGCCCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       156 AAGATTIGIGACTTCGGATTTGCACGAATTCTAATTCCAGGAGATGCCTACACAGACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAACCTGAGGACATGGAGACTCTTGAAGAAAATTCTCAAATGTTCAGCCTATGGCTTTA
                                                                                                                                                                                                                                                               DNA Sequencing by: Agencurt Bioscience Corporation Clone distribution: NCI-CGAP clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov. i column: 16 Plate: LLCM3144 row: i column: 16 High quality sequence stop: 468.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: John C. Marshall, M.D., Ph.D
CDNA Library Preparation: CLONTECH
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 825;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tch
41.3%; Score 390.6; DB 6;
al Similarity 83.3%; Pred. No. 1.7e-88;
455; Conservative 0; Mismatches 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="NICHD_Rr_Pit1"
/note="Vector: pDNR-LIB; S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tissue_type="Pitutary"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:10116"
/clone="IMAGE:6888377"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1, .825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local
Matches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                  AUTHORS
TITLE
                                                                                                           JOURNAL
COMMENT
          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CB315094 825 bp . mRNA linear EST 04-MAR-2003
AGENCOURT 11526413 NICHD Rr Pitl Rattus norvegicus cDNA clone
IMAGE:6888377 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      957 CTGGGCTTCTTAAAGGGCTGCCTCCACATGGATCCTGGTGAGAGGCTGACATGCGAACAG 1016
120
                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                        CCCAACCTGGTCAACCTCCTGGAAGTCTTCCGGAAGAAGCGGAAGGCTTCACCTGGTGTTC 416
                                                                                                                                                                                       GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                       GACCCTGTCATAAAGAAAATCGCCTTCGAGAAATCCGCATGCTCAAGCAACTCAAGCAC 356
                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTACTGCGACCACACGGTGCTTCACGAGCTGGATCGGTATCAGAGGGGGTACCAGAG 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        176
                                                                                                                                                                                                                                                                                                                                                                                              597 AAGCTCTGTGACTTTGGGTTCGCACGGCTTCTCACTGGACCAGGTGACTACTACACGGAC 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                897 CCAGACCCTGAAGACATGGAACACTTGAATTTTCCAAACATCTCCTACTCTGCA 956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGAACTTCATGAAGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST.
Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
Rattus.
                                                                                                                                 237 recadadacacacecercagarcerescenteagagerrireresadaaceadagar
                                                                                                                                                                                                                                                                                          CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  477 ccrcrcgrgaagaacaraacrrggcagacacacacacrgraaarrrcrgccaraacar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537 AACTGCATACACAGAGGCGGGAAAATATTCTCATCACCAAACATCATCAGCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT----CCAGGAGATGCCTACACCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATGTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Taceresceaeceseresracescreaeceseseresrasresasasacacesasrander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCCCTGTAGATGTCTGGGCAATTGGCTGTGTTTTGCTGAGTTACTGTCCGGAGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAACACTAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             837 CTCATTCCCAGGCACCAGCAAGTATTTAGCATGAATCAATACTTCAGTGGGGTGAAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          crerrecadearceararrrreacearreadade 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGG 874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CB315094
CB315094.1 GI:28838974
```

셤

셤 ઠ

```
100.08;
  Best Local Similarity 100.
Matches 361; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   945 T 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176 T 176
                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                  765
                                                                    585
                                                                                                                                                                                                                                            705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
BY752739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                   g
                                                                                                                                                        ò
                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                              셤
                                                                                                                                                                                                                                            ⋧
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site 1: ECR I; Site 2: Not I; U.C.F-DU1 is a normalized cDNA library containing the following tissue (3): Primary Lung Epithelial Cells The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand CDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an ECR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library as sequence that is located between the Not I site and the (dT)la tail. The sequence tag for this
                                                                                                                                                                                                                     BUG86325
UI-CF-DU1-adn-i-10-0-UI.s1 UI-CF-DU1 Homo sapiens CDNA clone
UI-CF-DU1-adn-i-10-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="UI-CF-DUI-adn-i-10-0-UI"
/tissue_type="Primary Lung Epithelial Cells"
/dew stages="Adult"
/lab_host="DH10B [Life Technologies) (Tl phage resistant)"
/clone_lib="UI-CF-DUI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     University of Iowa
University of Iowa
2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
Tel: 319 356 4866
Fax: 319 356 7171
Email: paul-mccray@niowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Biosystems
576 GTTGGACAGTACCTACTTCGAGTCTTTTCAAGAGGACCAAATGAAAAGAAAAAGAAAAAGGCGCAA 635
                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 536)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAG_TISSUE=Lung Epithelial Cells Tissue nos 359-368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genome Res. 6 (9), 791-806 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ=GGCTGTAGGC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (www.openbiosystems.com)
Seq'primer: M13 FORWARD
POLYA=Yes.
                                                                                                                                                                                                                                                                                                         BU686325.1 GI:23541120
                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: McCray, PB
                                                                    900 TGAAGG 905
                                                                                                          636 TGAGGG 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          McCray Lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               discovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97044477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8889548
                                                                                                                                                                                                                                                                                                                                  EST.
                                                                                                                                                                                                   BU686325/c
                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                              RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
```

38.2%; Score 361; DB 5; Length 536;

Query Match

```
Ackardi, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kayosawa, H., Yagai, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Kiyosawa, H., Yagai, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Cchobach, C., Gojobori, T., Baldarelli, R., Hill, D. P., Bult, C., Harel, C., Corbani, L.B., Cousins, S., Dalla, B. Brusic, V., Chothia, C., Corbani, L.B., Cousins, S., Dalla, B., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Gusi, C., Godzik, A., Gough, J., Grimmond, S., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Numata, K., Okido, T., Pervan, W.J., Pertea, G., Pesole, G., Perori, M., Shimada, T., Numata, K., Okido, T., Red, D.J., Reid, J., Ramachandran, S., Ravasi, T., Reed, D.J., Reid, J., Rimmada, K., Sandelin, A., Schneider, C., Sepule, C.A., Setou, M., Shimada, K., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Verrado, R., Wagner, L., Wahlested, C., Wang, Y., Watanabe, Y., Wall, M., Sandelin, Y., Wallming, L.G., Wanhaw-Boris, A., Yanagisawa, M., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P., Kawawa, T., Koman, M., Matemata, K., Ishii, Y., Itoh, M., Kadwa, T., Koman, T., Kawa, J., Azawa, K., Arakawa, T., Kuda, S., Hara, A., Hashizume, W., Imotani, K., Ishii, Y., Rogers, J., Barney, B. and Hayashizaki, Y. Sakai, R., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, D., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R., Sakai, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EV752739 RIKEN full-length enriched, adult inner ear Mus musculus CDNA clone F930014106 5', mRNA sequence.
                                                  ö
                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               416 TGGCATCACTATACCTGAGCCAGAAGACATGGAAAACTCTTGAGGAAAAGTTCTCAGATGT 357
                                                                                                                                                                                                                                          536 GACAGGCCAGCCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAG 477
                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                      476 AACACTAGGAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCA 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            356 TCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATT 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          825 AACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAA 884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             296 AACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAA 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       885 AAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAGGTACTTCCGCTCAAAAG 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236 AAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCCAACAGGTACTTCCGCTCAAAAG 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 689)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATT
                                                  ö
: Pred. No. 5.5e-81;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY752739.1 GI:27183802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
```

```
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence: 5' CTCGAGTTTTTTTTTTTTTT 3'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'tissue type="testis"
dev_stage="10-12 week old"
lab_host="SOLR (kanamycin resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   648 TGTGCCANCCAGTGGTACCGAGCCCCCGA 676
                                                                                                                                                                                                                                                                                                                                                                                                                                481 GTAGCTACGAGATGGTACCGAGCTCCTGA 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="mRNA"
/strain="CD-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                500 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 339.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'db_xref="taxon:10090"
'clone="IMAGE:513953"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seg primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI385966
AI385966.1 GI:4199429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sex="males"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      j. .500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI:307801
                                                           409
          241
                                                                                                               301
                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
AI385966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                              g
                                                                                                            ò
                                                                                                                                                          셤
                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                               Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001) Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000) RIKBN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prepare mouse tissues.

Tissues were provided by Kirk W. Beisel ( Boys Town National Research Hospital 555 North 30th Street Omaha,NE 68131 USA ) whose assistance we gratefully acknowledge.

Please visit our web site (http://genome.gsc.riken.go.jp) for
                                                                                                                                                                                                                                                                                  Email: genome_rese@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P.,
Fukuda,S., Hashizume, W., Hayashida,K., Hirozane,T., Hori,F.,
Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Kawai,J., Kojima,Y.,
Kondo,S., Konno,H., Koya,S., Miyazaki,A., Murata,M., Nakamura,M.,
Nomura,K., Numazaki,R., Ohno,M., Ohsato,N., Saito,R., Sakazume,N.,
Takeda,Y., Waki,K., Watahiki,A., Muramatsu,M., and Hayashizaki,Y.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      229 IGCAGAAACAAATCTICIGGACAAGIAGIAGGGATCAAAAATITCGIGGAAICIGAAGAI 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GATCCIGTTGATAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    169 ATGGAAAAGTATGAAAAGCTAGCTAAGATCGGAGAAGGGTCTTATGGCGTTGTATTCAAG 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289 GATCGTGTCGTTAGGAAAATAGCCCTGCGGAAATCCGTATGCTGAAGCAGTTGAAACAC 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="P930014106"
/tissue_type="inner ear"
/dev_stage="adult"
/clone_lib="RIKEN full-length enriched, adult inner ear"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 38.1%; Score 360.2; DB 6; Best Local Similarity 82.7%; Pred. No. 9.2e-81; Matches 421; Conservative 0; Mismatches 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db xref="taxon:10090"
                                                                                                    Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/strain="C57BL/6J"
                             Nature 420, 563-573 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      further details
                                                                              12466851
                                                   22354683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                     JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DRIGIN
```

g

g ò

ò 엄 ò

```
m134h09.yl Stratagene mouse testis (#937308) Mus musculus cDNA
clone IMAGE:513953 5' similar to gb:X66358 SERINE/THREONINE-PROTEIN
KINASE KKIALRE (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 27-JAN-1999
GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This read is a RESEQUENCE of a previously sequenced mouse clone This read has been verified (found to hit its original self in the correct orientation)
                                                                                                                                                                                                                                                                                                                  AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                         529 AATTGTATTCATCGGGATGTAAAACCTGAAAACATCCTAATAACCAAGCAGGGGATGANT 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGGTTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  589 AAGATTTGTGACTTTGGATTTGCACGAATTCTAATTNCA-GAGACGCCTACACANGACTA 647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muzidae; Musinae; Mus.
1 (Dases 1 to 500)
Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Puderwood,K., Sceptoe,M., Theising,B., Allen,M., Bowers,Y.,
Person,B., Swaller,T., Gibbons,M., Pepc,D., Harvey,M., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R.,
The WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="Stratagene mouse testis (#937308)"
/note="Organ: testis; Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: XhoI; Cloned unidirectionally. Primer:
Oligo dT. Average insert size: 1.0 kb; Uni-ZAP KR Vector;
-5' adaptor sequence: 5' GAATTCGGCACGAG 3' ~3' adaptor
                                                                                                                                                                                                                     469 GGAGTGATTAAAAGTGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This clone is available royalty-free through LLNL , contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
```

```
organism="Gallus gallus"
                                                                                                                                                                                                                                                                                                                                                                                         483; Conservative
                                                                                                                                                                                                                                                                                                                                                            Ouery Match
Best Local Similarity
Matches 483; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  517
                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA
                                                           7
                                                                                                                                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BU221831 824 bp mRNA linear EST 25-NOV-2002
603750354F1 CSEQCHN04 Gallus gallus cDNA clone ChEST661113 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bosch, E.,
                                                                                                                                                                                                                                                          374
                                                                                                                                                                                                                                                                         179 TGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCACAATTGTATTCATCG 238
                                                                                                                                                                                                                                                                                                                                               298
                                                                                                                                                                                                                                                                                                                                                                                          299 TGGATTTGCACGAGTTTCTAATTCCAGGAGACGCCTACACACAGACTATGTTGCCACCAGGGG 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAA 194
                                                                                                                                                                       59 CCTCATCGAGGTGTTCAGAAAGAGAAAAATGATGCATCTAGTTTTTGAGTACTGTGATCA 118
                                                                                                                                                                                                   255 TACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGAAAAG 314
                                                                                                                                                                                                                              CACACTGTTAAACGAGCTGGAGAGAAACCCAAACGGAGTTTCTGATGGAGTGATTAAAAG 178
                                                                                                                                                                                                                                                                                                                   434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCGTCGCTGTGTTTATGCAGAGCTTCTGACGTGTCAGCCACTCTGGCCCGG-AAATA 477
                                                                                                                                           CCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTTAGTTTTTGAATACTGTGATCA 254
                                                                                                                                                                                                                                                                                                                                                                                                                                  GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATG 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAAATAGCCCTGCGGGAAATCCGTATGCTGAAG---TTGAAACACCCCAAACCTCGTGAA 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Archosauria, Aves, Neognathae, Galliformes, Phasianidae,
Phasianinae, Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Boardman, P.E., Sanz-Ezquerro, J., Overton, I.M., Burt, D.W., Bosch, Fong, W.T., Tickle, C., Brown, W.R., Wilson, S.A. and Hubbard, S.J. A Comprehensive Collection of Chicken cDNAs

Curr. Biol. 12 (22), 1965-1969 (2002)
                                                                                                                                                                                                                                                                                                                                                                        435 CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG
                                                                                                                                                                                                                                                         CGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG
                                                                                                                                                                                                                                                                                                                 375 AGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Science and Technology
                                                      .
4
                             DB 1; Length 500;
                            Score 333.6; DB 1; Length
Pred. No. 5.3e-74;
0; Mismatches 84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Department of Biomolecular Sciences
University of Manchester Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Box 88, Manchester, M60 1QD, UK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 01612008930
Fax: 01612360409
Email: Simon.Hubbard@umist.ac.uk.
Location/Qualifiers
1. 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST.
Gallus gallus (chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BU221831.1 GI:25410266
                          35.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                615 AGATGTGGACCAACTT 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGACGTGGACCACCTT 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Simon Hubbard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 824)
                          Query Match 35.3
Best Local Similarity 82.3
Matches 408; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12445392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22335534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UMIST)
PO Box 6
                                                                                    135
                                                                                                               0
                                                                                                                                             195
                                                                                                                                                                                                                             119
                                                                                                                                                                                                                                                          315
                                                                                                                                                                                                                                                                                                                                                                                                                                  495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
BU221831
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
ORIGIN
                                                                                                                                                                                                                                                                              음
                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                    ઠે
                                                                                                            셤
                                                                                                                                           ò
                                                                                                                                                                셤
                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
```

```
/clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSECCHN04"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib="CSEC"
//clone lib=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAATTTGTGGAATCTGAAGATGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGT 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62 AAGTTCCTGGAGTCCGAGGAGGACCGGTGATCCGGAAGATCGCGCTGCGGGAGGTCCGC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 ATGCTGAAGCAACTGAAAACCCCCAACCTGGTGAACCTGCTGGAGGTGTTCAGGAGAAAG 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220 AGGAAAATGCATTTAGTTTTTGAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGA 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280 AACCCAAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCT 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            340 CTTAATTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTA 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302 GTGAACTTTTGTCACAAACACAAACTGCATCCATCGAGAGTGTAAAGCCAGAAAACATCCTG 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGGGGACACGCAGTATGGCCCTCCTGTGGACGTGTGGGCAATAGGCTGTGTCTTTGCG 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTG 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   542 GAGCTGCTCTCCGGGGTGCCACTGTGGCCCGGCAAGTCAGACGTGGACCAGCTGTACCTC 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCCGGAGAACATTGGGGGTCTTATTCCCAGGCACCAGCAAGTGGTTCAGCACCAAACC 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTTATGGGGTTGTATTCAAATGCAGAACAAAACCTCTGGACAAGTAGTAGCTGTTAAA 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 TCCTACGGCGTCGTCTTCAAGTGCCGCAACAGGGAGACGGGGCAGATCGTGGCCATCAAG 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160 ATGTTGAAGCAATTAAAACATCCAAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAACTAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5; Length 824;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33.8%; Score 319.4; DB 5; Length 67.2%; Pred. No. 2.4e-70; ive 0; Mismatches 231; Indels
/mol_type="mRNA"
/strain="White Leghorn, Hisex"
/db_xref="taxon:9031"
/clone="ChEST661113"
                                                                                                                                                                                                                             /tissue_type="whole embryo"
                                                                                                                                                                                                                                                                                  /dev_stage="20-21"
/lab_host="DH10B"
```

ω

엄 à

```
AA061797 13-FEB-1997 m134h09.rl Stratagene mouse testis (#937308) Mus musculus cDNA clone IMAGE:513953 5' similar to gb:X66358 SERINE/THREONINE-PROTEIN KINASE KKLALRE (HUMAN);, mRNA sequence.
                                                                                                                                                       283 cócaaccicércaecticeresaasircirececasaaacesecerreacresistre 342
                                                                                                                                                                                                                                                                             343 GAGTACTGCCACCACACAGTGCTTCACGAGCTGGACAGATATCAGAGGGGGGGTACCAGAG 402
                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                      223 GACCCTGTCATAAAGAAATCGCCCTTCGAGAAATCCGCATGCTCAAGCAACTCAAGCAT 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dubuque, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  583 racerecente caseras de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de contra de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643 CCCCCAGTAGATGTCTGGGCAATTGGGTGTGTGTTTGCTGAGTTGCTGTCCGGAGTGCCT 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 938)
Marra,M., Hillies,B., Allen,M., Bowles,M., Dietrich,N., Dubuque,T. Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clone is available royalty-free through LLNL , contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                             301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                        403 CCTCTCGTGAAGAACATAACTTGGCAGACACTGCAGGCTGTGAATTTCTGCCATAAACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 463 AACTGCATACACAGAGATGTGAAGCCGGAAAACATTCTCATCACCAAACACTCAGTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT----CCAGGAGATGCCTACACCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      523 Addercrierdakerrrrederrrredeserrenterenegaekeregaekerakereake
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-HHMI Mouse EST Project
Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer: -28m13 revl ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
/mol_type="mRNA"
/strain="CD-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seg primer: -28mls rev. ...
High quality sequence stop: 442.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        703 CTGTGGCCAGGAAATCGAATGTG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598 CTGTGGCCTGGAAATCAGATGTG 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA061797.1 GI:1555606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MGI:307801
                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
AA061797
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                    g
                                                                  8
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /done libe="NITH MGC 235"
//oote="Organ: kidney; Vector: pExpress-1; Site_1: EcoRV; Site_2: Nor!; RNA obtained from pooled kidney tissue from a mix of male and female animals at 8 wk old. Tissues were snap-frozen before RNA extraction and purification (Tri-reagent method). CDNA was primed using oligo-dT primer: 5-pGACTAGTTCTAGATCGCGAGCGCCCC(7)25-3' and cloned into the EcoRV/NotI sites of pExpress-1. Size-selection >1.4kb fesulted in an average insert size of 2.2 kb. This primary library is non-normalized constructed by Express Genomics (Frederick, MD). Note:
                                                                                                                                                                                                                                        CK482747

AGENCOURT 17606510 NIH MGC 235 Rattus norvegicus cDNA clone IMAGE:7110321 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 IGCAGAAACAAAACCICTGGACAAGIAGIAGCIGITAAAAAAITIGIGGAAICTGAAGAI 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Daniels S. Gerhard, Ph.D.

Contact: Daniels S. Gerhard, Ph.D.

Office of Cancer Genomics

National Cancer Institute / NIH

Bldg. 31 Rml0AOT Bethesda, MD 20892

Email: cgapbs-r@mail.nth.gov

Tissue Procurement: Howard Jacobs

CDNA Library Preparation: Express Genomics

CDNA Library Preparation: Express Genomics

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

http://mage.llhl.gov e column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  þe
695 GGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAG
                                                                      662 Adrircricagcedecenaacearrecadaceceadageacearegeagecearrege
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163 recadadacadadacacedegroagarceredecarcaagaggrircregaaacceaagar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATCCTGTTGTTAAGAAAATAGCACTAÁGAGAAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 757;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 316.8; DB 7;
Pred. No. 1.1e-69;
0; Mismatches 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Rattus norvegicus"
/mol_type="mRNA"
/db_xref="taxon:10116"
/clone="IMAGE:7110321"
/tissue type="kidney, pooled"
/lab_host="DH10B TonA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chis is a NIH_MGC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 695.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                            CK482747.1 GI:40827095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 70.4%;
Matches 439; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 757)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .757
                                                                                                                                                                                                                                                                                                                                                           CK482747
                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                        VERSION ·
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                         RESULT 9
CK482747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
```

ORIGIN

엄

q ò

ò

```
satoh@ascidian.zool.kyoto-u.ac.jp.
Location/Qualifiers
1. .598
/organism="Ciona intestinalis"
                                                          /mol_type="mRNA"
/db_xref="taxon:7719"
/clone="cilv41b18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CK472415
CK472415.1 GI:40816513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           norvegicus
 Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                           191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                  131
                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                 Query Match
                                                                                                                                                                                               Best Local
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
CK472415
              FEATURES
                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AV986182 Nori Satoh unpublished cDNA library, larva Ciona intestinalis cDNA clone cilv41b18 5', mRNA sequence.
                                                                                                      Site_1:
Primer:
XR Vector;
                                                                                                                                                                                                                                           3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona; Phlebobranchia; Cionidae; Ciona.
1 (bases 1 to 598)
Satoh,N., Satou,Y., Kohara,Y. and Shin-i,T.
Expressed genes in Ciona intestinalis
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         374
                                                                                                                                                                                                                                                                                                                                                  CCTCATCGAGGTGTTCAGAAGAAGAAGAAGAAGCATCCTAGTTTTTGAGTACTGTGATCA 117
                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    614
                                                                                                                                                                                                                                                                                                                                   254
                                                                                                                                                                                                                                                                                                                                                                                                                           118 CACACTGTTAAACGAGCTGGAGAAACCCAAACGGAGTTTCTGATGGAGTGATTAAAAG 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCACAATTGTATTCATCG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATG 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                475
                                                                                                                                                                                                                                                                                                  1 GAJAATAGCCCTGCGGGAAATCCGTATGCTGAAG---TTGAAACACCCCAAACCTCGTGAA 57
                                                                                                                                                   adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238 GGATGTAAAACCTGAAAACATCCTAATAACCAAGCAAGGGATGATAAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTACCGAGCCCCCGAACTTCTCGTGGGAGACGAAGTACGGTTCCTCTGTAGACGTGTG
                                                                                                                                                                                                                                                                         GAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAA
                                                                                                                                                                                                                                                                                                                                    CCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTTAGTTTTTGAATACTGTGATCA
                                                                                                                                                                                                                                                                                                                                                                                              TACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                     /tissue type="testis"
/dev_stage="10-12 week old"
/dev_stage="10-12 week old"
/lab_host="sOLR (kanamycin resistant)"
/clone lib="Stratagene mouse testis (#937308)"
/note="Organ: testis, Vector: pBluescript SK-; Sit
EcoRl; Site 2: Xhol; Cloned unidirectionally.
Oligo dT. Average insert size: 1.0 kb; Uni-ZAP XR
-5, adaptor sequence: 5, GAATTCGGCACCAG 3, ~3, ada
sequence: 5, CTCGAGTTTTTTTTTTTTTTTTTTT 3,"
                                                                                                                                                                                                                                         2;
                                                                                                                                                                                                            33.5%; Score 316.8; DB 1; Length 938; 82.9%; Pred. No. 1.1e-69; tive 0; Mismatches 77; Indels 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kyoto University
Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
Tel: 81-75-753-4081
Fax: 81-75-705-1113
 xref="taxon:10090'
            clone="IMAGE:513953"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AV986182.1 GI:19475050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Nori Satoh
Department of Zoology
                               /sex="males'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ciona intestinalis
Ciona intestinalis
                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                            Query Match
Best Local Simi
Matches 398;
                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                   195
                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                          315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AV986182
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                 ORIGIN
```

셤

원

ઠે

원

ઠે

용 ઠે 요

ઠે 요 à a ò 요 δ

```
CK472415

806 bp mRNA linear EST 14-JAN-2004
AGENCOURT 17613484 NIH MGC_236 Rattus norvegicus cDNA clone
IMAGE:7127611 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 AACGTATTGGTTTGGGAAGTTCTTCAAGCTGTTCACTTTTGCCATCAGCATAATTGTATAC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACAGAGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTG 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71 AAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGATGATCTTGTTG 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCATACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCA 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCATACAGTTTTAAATGAATTGGACAAACACAGTGAGGAGTACCAGAACATCATGTTA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTICGGGITIGCACAAATICIGA---TICCAGGAGAIGCCIACACCGAITAIGIAGCIA 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTITIGGATITIGCAAGAATITITIAACTIGGICCTIGGCGACGATITACACCGACTATGTGGCCCA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTG 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTTGAATACTGTG 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAACCTGATTGAAGTTTTCCGTCGAAAACGCAAATTACATCTTGTGTTCGAGTATTGTG 240
                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                605
/tissue type="whole animal"
/dev_stage="larva"
/clone lib="Nori Satoh unpublished cDNA library, larva"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 ATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAATGCAGAAACA
                                                                                                                                                                                                                                                                                                                                       AAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 806)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541 ATGTGTGGGCAATAGGTTGCGTATTTGCCGAGTTGTTGTGCGGACAGGGATATGGCC
                                                                                                                                                                                                                                  э
;
                                                                                                                                                              Length 598;
                                                                                                                                                                                                                              Indels
                                                                                                                                                              32.5%; Score 306.8; DB 2; Similarity 70.7%; Pred. No. 3.7e-67; 3; Conservative 0; Mismatches 172;
```

```
278 AGTATTGTGATCATACAGTTTTAAATGAATTGGACAAACACATGAGGGGGGGTACCAGAAC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   218 ATAACTTGGTGAACCTGATTGAAGTTTTCCGTCGAAAAACGCAAATTACATCTTGTGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:7719"
/clone="ciad64e08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP016186.1 GI:19507663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Nori Satoh
Department of Zoology
Kyoto University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 30.6%;
Best Local Similarity 71.0%;
Matches 397; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T: .597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP016186
                                                                                                                                                                               689
                                                                                                                                                                                                                                                                                                                749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP016186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                              원
                                                                                                                                                                           ò
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Rattus norvegicus"
/mol_type="mRNA"
/mol_type="mRNA"
/db_xref="texton:10116"
/clone="lype="kidney, pooled"
/tissue_type="kidney, pooled"
/lab host="MIH MGC_236"
/lab host="MIH MGC_236"
/lone lib="NIH MGC_236"
/note="Organ: Kidney; Vector: pExpress-1; Site_1: EcoRV;
Site_2: Not1; RNA obtained from pooled kidney Fissue from a mix of male and female animals at 8 wk old. Tissues were snap-frozen and kept at -80C for two days before RNA extraction and purification (Tri-reagent method). cDNA was primed using oligo-dT primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PATRICK AND ALLOW TO TAKE THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 152 AAATACGTATGAAGCAATTAAAACATCCAAATCTTGTGAACCTCATCGAGGTGTTCA 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACAC 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332 ITCAAGCICITAATITICIGICATATACATAACIGIATICACAGAGATATAAAACCIGAAA 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 ACATTCTCATCACCAAACACTCAGTCATTAAGCTCTGTGACTTTGGGGTTTGCACGGCTTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 TCACTGGACCTGGTGACTACTGACTACGTGGCCACCAGGTGGTACCGCTCACCTG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 AGCTGCTAGTGGGAGACACACAGTATGGCCCCCCAGTAGATGTCTGGGCAATTGGGTGTG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            569 ITITIGCAGAGCICCIGACAGGCCAGCCACTGIGGCCTGGAAAATCAGATGTGGACCAAC 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 Tertriecreaerrecretecedanerecererrereseceasaaarecearereseceaec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAATCCGCATGCTCAAGCAACTCACGCATCCCAACCTCGCTCAGCCTCCTGGAAGTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   212 GGAGAAAAAGGAAAATGCATTTAGTTTTTGAATACTGTGATCATACACTTTTTAAATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GCAGGAAGCGGCGCTTCACCTGGTGTTCGAGTACTGCCACCACACGGTGCTTCACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 regacadararcagagegegegraccagagecerceregagagacarragegagacac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 recagecrergaarrrerecearaakacakeraerracakadagarergaagecegaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         452 TGATT---CCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509 AACTICITGIGGGAGATACICAGIAIGGITCITCAGICGATAIAIGGGCIAIIGGIIGIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392 ATATICTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                       National Cancer Institute / NIH
Bidg. 31 Rm10A07 Bethesda, MD 20892
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Howard Jacobs
CDNA Library Preparation: Express Genomics
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can bettp://image.llni.gov
Phitp://image.llni.gov
Phite:/LiAM15022 row: e column: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 806;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.3%; Score 296.2; DB 7; Length 67.3%; Pred. No. 2e-64; Live 0; Mismatches 208; Indels
                            Contact: Daniela S. Gerhard, Ph.D. Office of Cancer Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 657.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 67.3
Matches 434; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
BP016186 Brois Satch unpublished cDNA library, young adult Ciona intestinalis cDNA clone ciad64e08 5', mRNA sequence.
481 TCTATCTGATAAGGAAAACCCTGGGGGACCTCATTCCCAGGCACCAGCAAGTATTTAGCA 540
                                                                                                                                                                                  541 TGAATCAGTACTTCAGTGGGGTGAAATTCCAGACCCTGAAGACATGGAAACACTTGAGT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ciona intestinalis
Ciona intestinalis
Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
Phlebobranchia; Cionidae; Ciona.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 ATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATC 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_stage="young adult" /dlone_lib="Nori Satoh unpublished cDNA library, young adult"
                                                                                                                         GTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 GCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98 GrcGGAACCGrGACTCGGGACAATTGTGGCCATCAAAAATTTGTCGAGTCAGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 158 ACCCGCTGATCAAGAAATCGCGCTGAGGGAAATCAGAATGTTAAAGCAATTGAAACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38 regagaaarargaaagarageraagarageegaaggarerraregeearrergaar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182 CAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAATGCATTTAGTTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 TGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 597;
                                                                                                                                                                                                                                              AAAAGTICTCAGAIGTICATCCTGTGGCTCTGAACTTCATGAAGG 793
                                                                                                                                                                                                                                                                                                        601 TGAAGTTTCCAAACATCTCCTACTCTGCTCTGGGCTTCTTAAGGG 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 289.2; DB 5; Length
Pred. No. 1.1e-62;
0; Mismatches 159; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Satoh,N., Satou.Y., Kohara,Y. and Shin-i,T.
Expressed genes in Ciona intestinalis
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: satch@ascidian.zool.kyoto-u.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Ciona intestinalis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
Tel: 81-75-753-4081
Fax: 81-75-705-1113
```

ä

9 9

180

240

300 360 360 420 420 477

g ò 셤 ઠે 셤 ò 셤 ò 용

```
A linear EST 15-MAY-2003 elegans cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTAGGAACAAAGACAGTGGAAGAATTGTGGCCATTAAGAAGTTCTTAGAGAGCGATGAC 120
                                                                                                                                                                                                                                                                            GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 AAATTATGTGACTTTGGATTCGCACGACATTGGCGGCTCCTGGGGGGTTTACACTGAC 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 565)

Reboul, J., Vaglio, P., Rual, J.F., Lamesch, P., Martinez, M.,
Armstrong, C.M., Li, S., Jacotot, L., Bertin, N., Janky, R., Moore, T.,
Hudson, J.R., Hartley, J.L., Brasch, M. A., Vandenhaute, J., Boulton, S.
Endress, G.A., Jenna, S., Chevet, E., Papasotiropoulos, V.,
                                                                                                                                      1 ATGGAAAAGTATGAAACCTAGGATTGGTTGGAGGGGGGAGTTACGGAATGGTGATGAAG
                                                                                                                                                                                  TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGTGATCAAAAGCGTATTATGGCAAACACTTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 CAAGTAGTTCAAAAGTATTTGTTTTCAGATCATTAATGGAATTGGATTTTGCCATAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTGTATTCACAGAGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 AATATCATACACAGAGATATAAAACCCGAGAATATATTAGTCTCACAGTCTGGCGTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cratiticcaggagaarccgaratigarcagcrgcarcaratrargacargrrraggraar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Traatroccadaccaccaccacratritaraaaarccreferirgcregagraagerig
                                                                                              1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                      GATAAAATGGTTAAGAAGATCGCTATGCGAGAAATCAAGTTACTAAAGCAACTGCGGCAT
                                                                                                                                                                                                                                                                                                                                                                   181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                             GAAAATTTGGTGAACCTGTTGGAAGTGTGTAAGAAAAAAAGAAGCGTTGGTACTTAGTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAATTTGTTGACCACACACATTCTTGATGACTTGAAACTCTTCCCAAATGGACTAGACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGATTTGTGACTTCGGGTTTGCACAAATTCTGAT - - - TCCAGGAGATGCCTACACCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541 AAGGCTGTTGATATCTGGGCCATTGGTTGTCATTGAGATGCTTATGGGGCAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazca; Nematoda; Chromadorea; Rhabditida;
Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
    Length 1956;
                                                 Indels
  Score 275.8; DB 3;
Pred. No. 3.7e-59;
0; Mismatches 282;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CB400506 565 bp mRNA CSTF177F10_1 AD-wrmcDNA Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGAGCCAGAGACATGGAAAC 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGAGATCAAAGACATAGAAGC 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CB400506 GI:30742233
29.2%;
61.6%;
                                                 Conservative
                       al Similarity
458; Conserv
  Query Match
Best Local S:
Matches 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
CB400506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                 원
                                                                                                                                                                                õ
                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALGEERKTLVVQDTNADPKTKDSKVLKVKGSK IDVEKTEKGTRASNGSCLHDNCTSHK
GLSGTSLRDCSNVTI DHPRNPCTA I PPLTHALLSAVARCI INAAMGTI PGVQNYRVDEKT
KKYNDPFVKPSQPSPSGI YNMNVSASVSNCPLPRKSKHSPPLDLAVSGEKYLLQANKK
RKEY PKVDVRLPELNYYHLPELRALEGI ARNSRLI KKENKCLSESR I PSLAAI DLHAS
SVASHQGAGSPVSDESEADLPRMEHQH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /translation="mekyeniclygegsygmymkcrnkdsgrivalkkrlesdddrwy
KKIAMREIKLLKQLRHENLVNLLEVCKKKKRWYLVFEFVDHTILDDLKLPPNGLDYQV
VQKYLPQIINGIGFCHSHNIIHRDIKPENILVSQSGVVKLCDFGFARTLAAPGEVYTD
YVATRWYRAPELLVGDVKYGKAVDIMAIGCLVIEMLMGQPLFFGESDIDQLHHIMTCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 (bases 1 to 1956)
Xu,C.S., Chang,C.F., Han,H.P., Wang,G.P., Chai,L.Q., Yuan,J.Y.,
Xu,C.S., Chang,C.F., Ma,H., Wang,L., Wang,S.F., Xing,X.K.,
Shen,G.M., Shi,J.B., Rahman,S., Wang,Q.N. and Zhang,J.B.
Direct Submission
Submitted (109-SEP-2003) Henan Bioengineering Key Lab, Henan Normal University, No. 148 Jianshe Road, Xinxiang City, Henan 453002, P.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPLCADLÍHHDFFQMDGFAERYSAGLSSAGCRDQGQRAGPTVTVLFVITPFAGCQPSA
SYSICLGSMQSPGQDLASYLADVKLARFSQELQLKIEKDARNNSLPKKFQIRKKEKDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTC 15-0CT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GNLIPRHQELFYKNPVFAGVRLPEIKDIBAEPLESRYPKLPEVVISLAKKCLHIDPDK
                                                                                                                                                                                  AGAITITGIGACTICGGGITIGCACAAAIICIGA---ITCCAGGAGAIGCCTACACCGAIT 478
                                                                                                                                                                                                            338 ATCATGTTAAACGTATTGTTTGGCAAGTTCTTCAAGCTGTTCACTTTTGCCATCAGCATA 397
                                                                                         421
                                                                                                                                   ATTGIRITACATCGIGAIGIAAAACCAGAGAACATATTAATCACTAAGCAAGGIGTTATCA 457
                                                                                                                                                                                                                                                                          ATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTT 538
  GAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xu,C.S., Chang,C.F., Han,H.P., Wang,G.P., Chai,L.Q., Yuan,J.Y.,
Yang,K.J., Zhao,L.F., Ma,H., Wang,L., Wang,S.F., Xing,X.K.,
Shen,G.M., Shi,J.B., Rahman,S., Wang,Q.N. and Zhang,J.B.
Liver regeneration after PH
Unpublished
                                                                                         actgtattcacagagatataaaacctgaaaatattctaataactaagcaaggaataatca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AY383681 1956 bp mRNA linear Rattus norvegicus LRRGT00026 mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="liver regeneration-related"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
1. .1956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein_id="AAQ96239.1"
db_xref="G1:37654268"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon_start=1
product="LRRGT00026"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             CITCAGICGAIAIAIGGGC 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AY383681.1 GI:37654267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 1956)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AY383681
                                                                                                                                      398
                                                                                                                                                                                                                                                                                                                    518
                                                                                                                                                                                  422
                                                                                                                                                                                                                               458
                                                                                                                                                                                                                                                                          479
                                                                                                                                                                                                                                                                                                                                                                   539
                                                                                                                                                                                                                                                                                                                                                                                                             578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
A7383681
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
```

FEATURES

CDS

ORIGIN

600 657 9 717

```
Marc Vidal Laboratory

Dana Farber Cancer Institute

1 Jimmy Fund Way Smith 858, BOSTON, MA 02115, USA

Tel: 617 632 5739

Email: Marc Vidal@dfci.harvard.edu

Gesigned on the predicted protein encoding ORF. C. elegans ORFeome

clouing project: Contact david_hill@dfci.harvard.edu

marc_vidal@dfci.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev stage="mixed stage" /clone_lib="AD-wrmcDNA" /note="The AD-wrmcDNA library was generated with poly(A) + RNA isolated from both hermaphrodite and male N2 worms of all larval stages, embryos, adults and dauers and the subsequent generation of cDNAs by poly(A) priming. The cDNAs were cloned into pPC86"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGTTAAAAAATTTGTGGAATCTGAAGATGATCCTGTTGTTAAGAAAATAGCACTAAGA 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAATCAAAAAGTTTGTGGAAACTGAAGATGATCCGCATATTAAGAAATTGCGCTACGG 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    211 AGGAGAAAAAGGAAAATGCATTTAGTTTTTGAATACTGTGATCATACACTTTTAAATGAG 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACGGAACCGGAAACTTCATCTCGTCTTTTGTGATCGAACTGTACTTCACGAG 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271 CTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                245 TTGGAGAAATCCGCATGGAGTTAACGATGAACTCATAAAGAAAATAATTTATCAATTG 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAATT 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             451 CTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAA 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305 CTAGAAGCTCTTAAATTCTGTCACAGTCACAATGTATTCATCGAGATGTGAAACCGGAA 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           425 ATAAACACGACGGAAATGTATACTGACTATGTGGCAACTCGTTGGTACCGTAGTCCAGAA 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCTTGTGGGAGATACTCAGTATGTTCTTCAGTCGATATATGGGCTATTGGTTGTGTT 570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             365 AACATTTTCTTGACACGGAATGATCAAGTGAAACTTGGAGATTTCGGATTTGCTCGAATA 424
Tolias, P.P., Ptacek, J., Snyder, M., Huang, R., Chance, M.R., Lee, H., Doucette-Stamm, L., Hill, D.E. and Vidal, M.
C. elegans ORFeome version 1.1: experimental verification of the genome annotation and resource for proteome-scale protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAAGGGTCTTATGGGGTTGTATTCAAATGCAGAAACAAAACCTCTGGACAAGTAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTGAAGGTTCATATGTATATAAATGTAAAATAGGGATACTGGACAAATTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151 GABATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAACCTCATCGAGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28.6%; Score 269.8; DB 6; Length 565; larity 67.6%; Pred. No. 1e-57; Conservative 0; Mismatches 182; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   db xref="taxon:6239"
/sex="Hermaphrodite and male"
tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                         (2003) In press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .565
                                                                                                                         Nat. Genet. (2)
Contact: Vidal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
les 379; Conserv
                                                                                                     expression
                                                                                                                                                                                                                                                                                                                                                                                                                POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S:
Matches 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           511
                                                                                                                    JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
```

```
Db 485 CITCIGGICGGIGAIGITCAATAIGGGCCACCIGIAGACATTIGGGCTGIAGGAIGIGA 544

Qy 571 TITGCAGAGCICCIGACAGGC 591

Db 545 TAIGCGGAGCIGITGACGGC 565
```

Search completed: April 22, 2005, 01:23:07 Job time : 3022.15 secs

US-10-363-616-146 US-09-960-706-1079 US-10-357-930-24573 US-10-174-794-5 US-10-174-794-5 US-10-174-794-3 US-10-17-262-107 US-10-620-052A-33 US-10-072-036-112 US-10-072-036-114 US-09-969-034-4494 US-10-295-681-28 US-10-440-464-137 US-10-641-643-1037 US-10-723-860-7854

```
Sequence 6, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 7, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 11, Appl
Sequence 5, Appli
Sequence 30, Appl
Sequence 6, Appli
Sequence 9, Appli
                                                                                                                                                     April 21, 2005, 23:37:20 ; Search time 3580.63 Seconds (without alignments) 1602.273 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                        1 atggaaaagtatgaaaaatt........9ggtacttccgctcaaaagt 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/USO6_NEW PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/PCTUG_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USO9C_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USO9C_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USO9C_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
14: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
12: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
13: /cgn2_6/ptodata/1/pubpna/USOOC_PUBCOMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-766-691-11
US-10-766-691-5
US-10-33-314-30
US-10-250-889-6
US-10-766-691-9
US-10-766-691-3
US-09-834-496A-3
US-09-834-496A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-766-691-13
US-10-766-691-1
US-10-766-691-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       5633728 segs, 3035525691 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum Match 100%
Listing first 45 summaries
                                                                                                         OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                   US-10-766-691-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98.3
98.1
91.9
88.8
87.1
68.5
68.5
53.7
48.1
                                                                                                                                                                                                                                                                                               945
                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Regult
No.
```

```
Sequence 24573, Ascquence 21, Applisequence 21, Applisequence 117, Applsequence 117, Applsequence 118, Applsequence 118, Applsequence 118, Applsequence 118, Applsequence 28, Applsequence 314, Applsequence 314, Applsequence 314, Applsequence 314, Applsequence 314, Applsequence 314, Applsequence 314, Applsequence 316, Applsequence 316, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequence 68, Applsequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2447, Ap
Sequence 3111, Ap
Sequence 3745, Ap
Sequence 4192, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4192, Ap
7455, Ap
420, App
4, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7
Sequence 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   o,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 945;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRERAL INFORMATION:
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Trier, Glenn
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
FILE REFERENCE: LEX-0046-USA
CURRENT FILING DATE: 2000-09-27
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11
LENGTH: 945
                                                                                                                                                                                                                                                                                                                                                                                                                                      Control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 945; DB 19; Best Local Similarity 100.0%; Pred. No. 2.8e-238; Matches 945; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-843-641A-4192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: homo sapiens
US-10-766-691-11
US-10-766-691-11
   ð
```

```
301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TGCAGAAACCAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 TCAGTCGATATATGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661 ATCCCAAGACATCAATCTTTAAAAGTAAAGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                           ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661 ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                        Indels
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Polymucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT FILING DATE: 2004-01-28
FRIOR PRILING DATE: 2004-01-28
PRIOR PLILING DATE: 2000-09-27
PRIOR PLILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FRSEESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                    98.3%; Score 929; DB 19; L
100.0%; Pred: No. 4.7e-234;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                             LENGTH: 972
TYPE: DNA
ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 929; Conserv
                                                                                                                                                                                                                                                                                   US-10-766-691-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                             SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                        임
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        염
                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                      120
                                                                      120
                                                                                                                                         180
                                                                                                                                                                              240
                                                                                                                                                                                                             240
                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTICATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                       GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                       GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721 GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG 780
ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                        TGCAGAAACAAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGATTIGIGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841 CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGCCCCAAATTAAAAGAAAAGCACGTAAT
                                    TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                             121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGTAAACAT
                                                                                                                                                                            CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                    181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                               GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                           AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                      AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661 ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGCCCCAAATTAAAAGAAAAGCACGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCCAAGACATCAATCATTCTATAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901 GAAGGAAGAACAGAAGACGCCAACAGGTACTTCCGCTCAAAAGT 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGGAAGAAACAGAAGACGCCAACAGGTACTTCCGCTCAAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander
APPLICANT: Nehls, Michael
APPLICANT: Friedrich, Glenn
APPLICANT: Zambrowicz, Brian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
US-10-766-691-5
                                    61
                                                                                                       121
                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                ò
                                                                   셤
                                                                                                       ò
                                                                                                                                  요
                                                                                                                                                                          ò
                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           硆
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
```

540

900 900 9 720 721 GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCTGTGGCTCT 780

GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG

721

G.

g 6

420 480

360

ö

Gaps

.; 0

120 120 180 180 240 240 300 300

658

718 540 600

9 898 720 958 780 840

598 420

ò

```
GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG 1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1019 AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAAGAAAAGCACGTAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                          539 GGAGTGATCAAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                 839 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA
                           GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             419 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                          GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                     361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGCTACGAGATACCTAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              899 ATCCCAAGACATCAATCATTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCTGTGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781 AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
Sequence 6, Application US/10250889

Publication No. US20040115629A1

GENERAL INFORMATION:
APPLICANT: PANEER, Scott R; LINCOLN, Stephen E.;
APPLICANT: ALTUS, Christina M.; DUFOUW, Gerard E.;
APPLICANT: DAKKSON, Jennifer L.; JONES, Anisea L.;
APPLICANT: DAM, Tam C.; LIU, Tommy F.;
APPLICANT: DAM, Tam C.; LIU, Tommy F.;
APPLICANT: DAM, Tam C.; LIU, Tommy F.;
APPLICANT: GRENIN, Bernard, Rakesh;
APPLICANT: GRENIN, T., Edward H.; PERALTA, Careyna H.;
APPLICANT: GRENIN, MAICE J.; CHANG, Simon C.;
APPLICANT: GRENIN, T., Edward H.;
APPLICANT: GRENIN, MAICE H.; LEWIS, Samantha A.;
TITLE OF INVENTION: WOLECULES FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERERENCE: PT.1195 USN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901 GAAGGAAGAACAGAAGACGCCAACAG 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/250,889
                                                                                                                                                                                         241
                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1139
                           359
                                                                                181
                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                ઠે
                                                                                                                      셤
                                                                                                                                                                                à
                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                           840
                                                                                                                               CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGTAAT 900
                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             239 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                    AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 98.1%; Score 927; DB 17; Length 1790; Best Local Similarity 100.0%; Pred. No. 2.2e-233; Matches 927; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: INTOKTATION:
APPLICANT: INTOKTATION:
APPLICANT: HAPALIA, April J.A.; GURURAJAN, Rajagopal
APPLICANT: HAPALIA, April J.A.; GURURAJAN, Rajagopal
APPLICANT: HAPALIA, April J.A.; GHAMLA, Narinder K.
APPLICANT: GANDHI, Amena R.; RAMKUMAR, Jayalaxmi
APPLICANT: BAUGHN, Mariah R.; TRIBOULEY, Catherine M.
APPLICANT: THORNTON, Michael B.; BANDAN, Olga
APPLICANT: THORNTON, Michael B.; LU, Yan
APPLICANT: BURFOND, Neil; LAL, Preeti G.
APPLICANT: BURFOND, Neil; LAL, Preeti G.
APPLICANT: BURFOND, Neil; LAL, Preeti G.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung Aina M.
APPLICANT: GRENNEY, Liam; LU, Dyung APPLICANTON NUMBER: US 60/220,038
PRIOR APPLICATION NUMBER: US 60/222,112
PRIOR APPLICATION NUMBER: US 60/222,831
PRIOR APPLICATION NUMBER: US 60/222,831
PRIOR APPLICATION NUMBER: US 60/222,831
PRIOR FILING DATE: 2000-09-04
PRIOR APPLICATION NUMBER: US 60/224,729
PRIOR APPLICATION NUMBER: US 60/224,729
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR PRIOR FILING DATE: 2000-08-04
PRIOR PRIOR FILING DATE: 2000-08-04
                                                                                                                                                                                                                                     901 GAAGGAAGAACAGAAGACGCCAACAGGT 929
                                                                                                                                                                                                                                                                           901 GAAGGAAGAAACAGAAGACGCCAACAGGT 929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No: 1698381CB1
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 30, Application US/10333314
Publication No. US20030211093A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 30
LENGTH: 1790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-333-314-30
                                                                          781
                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                  셤
                                                                                                                                                                              셤
                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                 g
```

ઠે 유 ò 원

```
GTICTICAGICGAIAIAIGGCIAITGGITGIGITTITGCAGAGCICCIGACAGGCCAGC 595
                                                                                                                                                                                                              715
                                                                                                                                                                                                                                                                                                                            836 AACTCCTGGAGAGCTCCTACTTTGATTCTAAGAGGCCCAAATTAAAAGAAAAGCAC 895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                671 GTTCTTCAGTCGATATATGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCAGG
                                                                                                                                              731 CACTGTGGCCTTGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA
                                                                                                                                                                                               656 AATTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                               911 CTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATCAGATGACTGTTCCC
                                                                                                   CACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA
                                                                                                                                                                                                                           CTCTGAACTTCATGAAGGGTGTCTGAAGATGAATCCAGATGACGATTAACCTGTTCCC
                                                                                                                                                                                                                                                                                             TACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TGCAGAAACAAAACCTCTGGACAAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schuktan invokation:

APPLICANT: Donoblo, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Nehls, Michael
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Novel Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
CURRENT APPLICATION NUMBER: US/10/766,691
CURRENT FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FRSESEQ FOR Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 839; DB 19;
Pred. No. 2.5e-210;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  896 GTAATGAAGGAAGAACAGAAGACGCCAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 9, Application US/1076691; Publication No. US20050042626A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 88.8%;
Best Local Similarity 90.8%;
Matches 945; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: homo sapiens
US-10-766-691-9
                                                                                                969
                                                                                                                                                                                                                                                                                                716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                              ò
                                                                                                                                         g
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120 TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTA-TGTTGAAGCAATTAAAAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299 AIGGAGIGAICAAAAGGGIAITAIGGCAAACACTICAAGCICIIAAITICIGICAIAIAC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             479 ATGTAGCTA-CGAGATGGTACCGAGCT-CCTGAACTTCTTGTGGGAGATACT-CAGTATG 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGA-AACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTCAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191 TGCAGATAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        359 ATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAAGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              491 ATAACTGTATTCACAGAGATATAAAACCTGAAAAATATTCTAATAACTAAGCAAGGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     611 ATGTAGCTAGCGAGATGCTACCGAGCTCCCTGAACTTCTTGTGGGAGATACTCCAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAAGATTTGTGACTTTGGGTTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application data removed - See File Wrapper or PALM NUMBER OF SEQ ID NOS: 113 SOFTWARE: PERL Program SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91.9%; Score 868.8; DB 18; Length 1678; ilarity 99.2%; Pred. No. 4.5e-218; Conservative 0; Mismatches 2; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No: LI:058298.1:2001JAN12
US-10-250-889-6
PRIOR PELING DATE: 2002-07-09
PRIOR PLING DATE: 2002-01-09
PRIOR FILING DATE: 2002-01-09
PRIOR PLING DATE: 2002-01-09
PRIOR PLING DATE: 2002-01-12
PRIOR APPLICATION NUMBER: US 60/261,864
PRIOR PLING DATE: 2001-01-16
PRIOR PLING DATE: 2001-01-16
PRIOR PLING DATE: 2001-01-17
PRIOR APPLICATION NUMBER: US 60/262,207
PRIOR APPLICATION NUMBER: US 60/262,207
PRIOR APPLICATION NUMBER: US 60/262,207
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR APPLICATION NUMBER: US 60/262,209
PRIOR PLING DATE: 2001-01-17
PRIOR APPLICATION NUMBER: US 60/262,164
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Simi]
Matches 925; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   419
```

g ò 셤 ò Dp à 셤 ò 셤 à 셤 ð

셤

; TITLE OF INVENTION: Polynucleotides Encoding the Same; FILE REFERENCE: LEX-0046-USA; CURRENT APPLICATION NUMBER: US/10/766,691 ; CURRENT FILING DATE: 2004-01-28 ; PRIOR APPLICATION NUMBER: US/09/671,050 ; PRIOR FILING DATE: 2000-09-27 ; PRIOR FILING DATE: 1999-09-28 ; NUMBER OF SEQ ID NOS: 13 ; SEQ ID NO 3 ; LENGTH. 1068 ; TYPE: DNA ; ORGANISM: homo sapiens US-10-766-691-3	Query Match 87.1%; Score 823; DB 19; Length 1068; Best Local Similarity 90.6%; Pred. No. 4.2e-206; Matches 929; Conservative 0; Mismatches 0; Indels 96; Gaps .1;	Oy 1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA 60 	Qy         61         TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT         120           Db         61         TGCAGAAACAAAACCTCTGGACAAGTAGTAGTAGAAAATTTGTGGAATCTGAAGAT         120	OY 121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180	Oy 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240	OY 241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	OY 301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360	OY 361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAAGG	QY         421         AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT         480           Db         421         AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATTAT         480	Oy 481 GIAGCTACGAGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGTTCT 540	QY         541         TCAGTCGTATATAGGCTATTGGTTTTTTGCAGAGCTCCTGACAGGCCACTG         600           bb         541         TCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCAGCCA	αy         601         TGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT
181   CCAMATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240	421 AAGATTIGIGACTIGGGGTIGGACAAAAITCTGATICCAGGAGATGCCTACACCGATIAT 480	481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540	541 TCAGTCGATATATGGCTATTGGTTGTTTTTTGCAGACTCCTGACAGGCCAGCCA	601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT 650 	651 650 661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720	651	685 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT 744 	745 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 804 	805 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT 864	865 TTTCAAGAGGCCCAAATTAAAGAAAAGCACGTAATGAAGGAAG	925 CAGGTACTTCCGCTCAAAGT 945 	ESULT 6  Squence 3, Application US/10766691  Sequence 3, Application US/10766691  Publication No. US20050042626A1  GENERAL INFORMATION:  APPLICANT: Donnoho, Gregory  APPLICANT: Turner, C. Alexander Jr.  APPLICANT: Wehls, Michael  APPLICANT: Friedrich, Glenn  APPLICANT: Zambrowicz, Brian  APPLICANT: Sands, Arthur T.  TITLE OF INVENTION: Novel Human Kinase Proteins and

us-10-766-691-11.rnpb

	RESULT 8 US-09-834-496A-1 Sequence 1, Application US/09834496A Sequence 1, Application US/09834496A Sequence 1, Application US/09834496A Sequence 1, Application US/09834496A SERENL INFORMATION: TITLE OF INVENTION: 14257 NOVEL PROTEIN KINASE MOLECULES AND TITLE OF INVENTION: 14257 NOVEL PROTEIN KINASE MOLECULES AND TITLE OF INVENTION: 14257 NOVEL PROTEIN KINASE MOLECULES AND STILE OF INVENTION: 14257 NOVEL PROTEIN KINASE MOLECULES AND STILE REFERENCE: 381552000900 CURRENT FILING DATE: 2001-04-13 PRIOR TILING DATE: 2001-04-13 PRIOR FILING DATE: 2000-04-13 SEQ ID NO 1 IENGTH: 882 TYPE: DNA SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1 IENGTH: 882 TYPE: DNA SORGANISM: Homo sapiens FEATURE: NAME/KEY: CDS LOCATION: (129)(815)	Query Match         68.5%;         Score 647;         DB 9;         Length 882;           Best Local Similarity         99.2%;         Pred. No. 8.8e-160;         60;         Gaps         0;           Matches 650;         Conservative         0;         Mismatches         5;         Indels         0;         Gaps         0;           Qy         1 ATGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATCAA         188         6         15CAGAAACAAGAAAATTAGCTAAGAGAGAGGGGTCTTATGGGGTTGTATCAA         188           Qy         61 TGCAGAAACAAAAATAGCTAAGAGAAGAGGGGTTTATGGGGTTGTATCAAA         120           Db         189 TGCAGAAACAAAAAAAAAAAGGAAAATAGCTATTAAAAAATTTGTGGAATCTGAAGAT         140           Db         249 GATCCTTTGTGAAAAATAGCACTAAGAGAAATACGTATGTTGAAAAATTTGTGAATTTTTTT         140           Db         249 GATCCTTTGTGAAAAATAGCACTAAGAGAAATACGTATTTTGAATTTTT         240           Db         249 GATCCTTTGTGAACATCATCGAGGTGTTCAGGAGAAAAAGGAAATGCATTTAGTTTTT         240           Db         241 GAATACTGTGATCATACATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT         240           Db         300 CCAAATCTTGTGAACATCATCGAGGGGTGTTCAGGAAAAAAGGAAAACCTGATGAAGAAACCTGATTAGTTTTTT         240           Db         301 GGAGTGATCATAAAAACTATAGGCAGGAAAAAACCTGTCATAATTCTGTCATTATACTGCTGAT         300           Db         429 GGAGTGATCAAAAAACTATTAGGCAAACTTCAAGAGACTTCAAAAAACATAATT
	SULT 7 -09-834-496A-3 -09-834-496A-3 -09-834-496A-3 -09-834-496A-3 -09-834-496A-3 -09-834-496A-3 -09-834-496A-3 -09-834-496A-3	Query Match         68.5%; Score 647; DB 9; Length 687;           Best Local Similarity         99.2%; Pred. No. 7.8e-160;           Matches 650; Conservative 0; Mismatches 5; Indels 0; Gaps 0;           QY         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGAGAAGGGTCTTATGGGGTTGATTCAAA 60           Db         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGTGAAAAGGGTCTTATGGGGGTTGATTCAAA 60           QY         61 TGCAGAAACATACTGGACAAGTAGTGGTGTTAAAAAATTTGTGGAATCTGAAGAT 120           Db         61 TGCAGAAACAAAACTTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120           QY         121 GATCCTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAACCAATTAAAAAT 120           Db         121 GATCCTGTTGAACAAATAGCACTAAGAGAAATACGTATGTTGAACCAATTAAAAAT 180           QY         181 CCAAATCTTGTAAACAAAATAGCACTAAGAGAAAAACGTATGTTGAACCAATTAATAAAAT 180           QY         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAAGAGAAAAACCAATTAGTTTT 240           Db         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAAGAGAAAAACCAATTAGTTTT 240           QY         181 CCAAATCTTGTGAACTTTTAAATGGCTGGAAAAAAAAACCAAATGGAGTTTTTT 240           Db         241 GAATACTTGTGAACTTTTAAATGGCTGGAAAAAAAAAAA

Oy 361 AACTGTATTCACAGAGATATAAAACCTGAAATATTCTAATAACTAAGCAAGGAATAATC 420	Qy         421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTG	Qy 454	454 455	678 CTCCTGGCTTGGATCCATTGCTGACACAGTGTTTCACCATGGGGCCCAGGCTCATCTGGA 7	UY 454	Qy 454	Oy 454ATTCCAGAGATGCCTACACC 474	Oy 475 GATTALGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTAT 534	Oy . 535 GGTTCTTCAGTCGATATAGGCCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAG 594	595 CCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT 1038 CCACTGTGGCCTGGAAAATCAGATGTGGACACTTTATCTGATAATCAGAACACTAGTA		1098	ctgccgtagcctctcaaagtgctggaattacaggaaattaatcccaagacatcaatca	QY         679 ATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGGAA 738	Oy 739 ACTCTTGAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGT 798	Oy 799 CTGAAGATGAATCCAGATGACAGATTAACCTGTCCCAACTCCTGGAGAGCTCCTACTTT 858	Oy 859 GATTCTTTCAAGACCCCAAATTAAAAGAAAAGCACCTAATGAAGAAAGA	Qy 919 CGCCAACAGGT 929 	RESULT 10 US-10-766-691-1 ; Sequence 1, Application US/10766691 ; Publication No. US20050042626A1
Oy 421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT 480	OY 481 GTAGCTACGAGATACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540	Qy         541 TCAGTCGATAIATGGGCTATTGGTGTTTTTGCAGAGCTCCTGACAGGCCAGCCA	601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA	Db 729 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGTA 783	RESULT 9 US-10-766-691-13	; Sequence 13, Application US/10766691 ; Publication No. US20050042626A1 ; Camboar, Indonwarton:		; APPLICANT: Sands, Arthur T. ; TITLE OF INVENTION: Novel Human Kinase Proteins and ; TITLE OF INVENTION: Polynucleotides Encoding the Same ; FILE REFERENCE: LEX-0046-USA	CURRENT APPLICATION NUMBER: US/10/766,691 CURRENT FILING DATE: 2004-01-28 PRIOR APPLICATION UMBER: US/09/671,050 PRIOR FILING DATE: 2000-09-27		; SEQ ID NO 13 ; LENGTH: 1819 : TYPE: DNA	; ORGANISM: homo sapiens US-10-766-691-13	Query Match 53.7%; Score 507; DB 19; Length 1819; Best Local Similarity 69.8%; Pred. No. 9.8e-123; Matches 929: Conservative O. Mismatches O. Indels 402: Gans 2.	1 ATGGADAAGTATGAAAAATTAGCTAAGAAGAGAGAGGTTTATGGGGTTGTATTCAAA 60	DD 138 AIGGAAAAGIAIGAAAAAITAGCIAAGACIGGAGAAGGGICIIAIGGGGIGIAIICAAA 197 QY 61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120 TS 100 GCGAGAACAAAACTTGAACAAAAAAAAAAAAAAAAAAAA	121 GATCCTGTTGTTAAGAAATAGCACTAAGGAAATACGTATGTTGTGAAGCAATTAAAAACTT	DD 258 GAICCLIGITICATAGAAAATAGCACTAAGAAAATACGTATGTIGAAGCAATTAAAACT 31/ QY 181 CCAAATCTTGTGAACCTCATGGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240	241 GAATACTGTGAACCICATCGAGGTGIICAGGAAAAAAGGAAAATGGAGTTGCTGAT 241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	Oy 301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360 

```
Polynucleotides Encoding the Same
                FILE REPERENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/10/766,691
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 1999-09-28
NUMBER: OF SEQ ID NOS: 13
SEQ ID NO 7
LENGTH: 594
                                                                                                                                                                                                         TYPE: DNA
ORGANISM: homo sapiens
US-10-766-691-7
       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
US-10-363-616-146
                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 TGCAGAAACAAAACCTCTGGACAAGTAGTTGGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 IGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGGAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAATAATAAGAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
48.1%; Score 454.4; DB 19; Length 561;
Best Local Similarity 99.8%; Pred. No. 3.9e-109;
Matches 455; Conservative 0; Mismatches 1; Indels 0;
APPLICANT: Donoho, Gregory
APPLICANT: Donoho, Gregory
APPLICANT: Nehls, Michael
APPLICANT: Nehls, Michael
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: NOVEL Human Kinase Proteins and
TITLE OF INVENTION: NOVEL Human Kinase Proteins and
TITLE OF INVENTION: NOVEL Human Kinase Proteins and
TITLE OF INVENTION: 2004-01-28
FILE REFERENCE: LEX-0046-01-28
FRICH APPLICATION NUMBER: US/09/671,050
FRICH FILING DATE: 2000-09-27
FRICH APPLICATION NUMBER: US/09/671,050
FRICH APPLICATION NUMBER: US/0156,511
FRICH TIME DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/10766691
Publication No US20050042626A1
GENERAL INFORMATION:
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, Michael
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: homo sapiens
US-10-766-691-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
US-10-766-691-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

```
61 TGCAGAAACAAAACTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 Arggada Agrarga da Arggada Agrarga da Arggada Agrarga da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada da Argada 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 IGCAGAAACAAAAACCTCIGGACAAGIAGIAAGIAAAAAAAATTIGIGGAAICTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGGAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTT
                                                                                                                                                   Gaps
                                                                                                                                 0;
                                   Length 594;
Query Match
48.1%; Score 454.4; DB 19; Length
Best Local Similarity 99.8%; Pred. No. 4e-109;
Matches 455; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 146, Application US/10363616
; Publication No. US20040044181A1
; GENERAL INFORMATION:
; APPLICANT: Hyseq, Inc
; TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
; FILE REFERRINCE: 21272-113 (793)
; CURRENT APPLICATION NUMBER: US/10/363,616
; CURRENT FILING DATE: 2003-03-03
; PRIOR FILING DATE: 2003-03-03
; PRIOR FILING DATE: 2000-09-01
; NUMBER OF SEQ ID NOS: 490
; SEQ ID NO 146
; LENGTH: 1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGAGT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (463)..(1539)
```

```
301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCCAGGAAAATCGGATGTGGATCAGCTGTATCTGATTAGGAAGACCTTGGGGGAT 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1126 CTCATTCCTAGGCACCAGCAAGTGTTTAGCACGAATCAGTACTTCAGTGGAGTGAAAATT 1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ccasaccicrica a controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en controla en co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGGCTCCTAAAGGGCTGTCTCCACATGGACCCTAATGAAAGGCTGACATGTGAACAG 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGTTGCATCACCCATATTTTGAAAACATCAGAGAAATAGAGGATTTGGCAAAAGAACAC 1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              897
                                                                                                                                                                                                                                                                                           585
                                                                                                                                                                                                                                                                                                                                                                                           645
                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCTCGTGAAGAGCATAACTTGGCAGACACTGCAAGCTGTAAATTTTTGCCATAAACAC 825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                777
                                                                                                                                                                                           Argeagaagrargaaaarreggaaaarregagaagearecraregagrictrireaaa 525
                                                                                                                                                                                                                                             TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                           GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCCGGTGGATGTTTGGGCAATTGGCTGTGTTTTGCTGAGCTGCTT
                                                                                                                                                1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                        526 reradadacaegacacegercagarreresecercaagaagrreresaareaagar
                                                                                                                                                                                                                                                                                                                                                                                         GACCCTGTCATAAAGAAATTGCCCTTCGGGAAATCCGAATGCTCAAGCAACTCAAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                658 TTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGT
                                                                                                  Gaps
                                             44.0%; Score 415.4; DB 17; Length 1612; 66.7%; Pred. No. 1.3e-98; tive 0; Mismatches 301; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACAAACCAACAA 1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGAAGGAAGAA 910
                                                                      Best Local Similarity 66.7
Matches 609; Conservative
US-10-363-616-146
                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                  Query Match
                                                                                                                                                                                      셤
                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

RESULT 13 US-09-960-706-1079

```
APPLICANT: Munger, william E.

TITLE OF INVENTION: Identifying Drugs for and Diagnosis of Benign Prostatic Hyperplass)
TITLE OF INVENTION: Gene Expression Profiles
FITLE OF INVENTION: Gene Expression Profiles
FILE REFERENCE: 44921-5029-010S
CURRENT APPLICATION NUMBER: US/09/960,706
CURRENT FILING DATE: 2001-09-24
PRIOR PAPLICATION NUMBER: 60/223,323
PRIOR FILING DATE: 2000-08-07
PRIOR FILING DATE: 2001-06-05
PRIOR FILING DATE: 2001-06-05
NUMBER OF SEQ ID NOS: 1124
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         457 GAATATTGTGACCACACAGTTCTCCATGAGTTGGACAGATACCAAAGAGGGGTACCAGAA 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCTCGTGAAGAGCATAACTTGGCAGACCTGCAAGCTGTAAATTTTTGCCATAAACAC 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT----CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCTTTGTGACTTTGGATTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACGTGGCTACCAGGTGGTACCGCTCCCCTGAGCTGCTGGTGGGGGACACGCAGTACGGC 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          658 TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217 ATGGAGAAGTATGAAAAATTGGGAAAATTGGAGAAGGATCCTATGGAGTTGTTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      757 CCCCGGTGGATGTTTGGGCAATTGGCTGTGTCTTTGCTGAGCTGCTGTCAGGAGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۳
ښ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Genbank Accession No. US20030134280A1 X66358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 43.8%; Score 413.8; DB 10; Length Best Local Similarity 66.6%; Pred. No. 3e-98; Matches 608; Conservative 0; Mismatches 302; Indels
Sequence 1079, Application US/09960706
Publication No. US20030134280A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-960-106-1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
```

q ò

8 8

g à

ò

```
949 GACCCTGTCATAAAGAAATTGCCCTTCGGGAAATCCGAATGCTCAAGCAACTCAAGGAT 1008
                                                                                                                                                                                                                                                                                                                      1069 GAATATTGTGACCACACAGTTCTCCATGAGTTGGACAGATACCAAGAGAGGGTACCAGAA 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                        1189 AATTGCATACATAGAGACGTGAAGCCCAGAAATATCCTCATCACGAAACATTCCGTGATT 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGCTITGTGACTITGGATTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC 1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGGAAACCCAAATGGAGTTGCTGAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1429 CIGIGGCCAGGAAAAICGGAICGIGGATCAGCTGIATTAGGAAGACCTTGGGGGAT 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1489 CTCATTCCTAGGCACCAGCAAGTCTTAGCACGAATCAGTACTTCAGTGGAGTGAAATT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1549 ccadaccerdaddararddadaccaerradaarradaarreccadacarererrareerdee 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 AAGATTIGIGACTICGGGTTIGCACAAATICTGATT----CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1609 chdagachchaaladachthchcacahdaacchachdaalachahchaacha 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1669 citoridcarcaccaratrirgaaaacarcacagaaaraagagarrrggcaaaagac 1728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAAAGAAAAGGCACGT 897
                                                                                                                                                                                                                                                                                  301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                       AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                          TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   598 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       658 TIAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGAACTTCATGAAGGGTGTCTGAAGATGCAAATGCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           718 CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/10174794

Sequence 5, Application US/10174794

GENERAL INFORMATION:

TUTLE CATION NO. US20030166220A1

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES

CURRENT APPLICATION NUMBER: US/09/411,628

PRIOR FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-02

PRIOR FILING DATE: 1998-10-02

NUMBER: OS 60/102,906

MUMBER: OS 60/102,906

SEQ ID NO 5: SEQ ID NOS: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1729 GACAAACCAACAA 1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       898 AATGAAGGAAGAA 910
                                                                                                                                                                                241 (
                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 478
                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  838
                                                                                                                       d
                                                                                                                                                                           ò
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                        CTGTTGCATCACCATATTTTGAAAACATCAGAGAATAGAGGATTTGGCAAAAGAACAC 1116
                                                                                                                                                                                                      CTGGGGCTCCTAAAGGGCTGTCTCCACATGACCCTACTGAAAGGCTGACATGTGAACAG 1056
                                                                                            937 CCAGACCCTGAAGATAIGGAACCACTTGAATTAAAATTCCCAAACATCTCTTAICCTGCC 996
877 CTCATTCCTAGGCACCAGCAAGTGTTTAGCACGAATCAGTACTTCAGTGGAAGTGAAAATT 936
                                                   718 CCTGAGCCAGAAGACATGGAAAACTCTTGAGGAAAAGTTCTGAGATGTTCATCCTGTGGCT 777
                                                                                                                                                        CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTTCCCAA 837
                                                                                                                                                                                                                                                             CTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGCACGT 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KITS, AND METHODS FOR
I, PREVENTION, AND THERAPY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 TGCAGAAACAAAACTCTGGACAAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match

Query Match

Best Local Similarity 66.6%; Pred. No. 4.5e-98;

Matches 608; Conservative 0; Mismatches 302; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Endege, Wilson
APPLICANT: Endege, Wilson
TITLE OF INVENTION: LOBITIFICATIONS, KITS,
TITLE OF INVENTION: HUMAN PROSTATE CANCER
FILE REFERENCE: MAIL-007BCN
CURRENT FILING DATE: 2003-02-04
PRIOR PLING DATE: 2003-02-04
PRIOR PLING DATE: 2003-02-16
PRIOR PLING DATE: 2000-02-16
PRIOR PLING DATE: 2000-02-16
PRIOR PLING DATE: 2000-03-16
PRIOR PLING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-6
PRIOR FILING DATE: 2000-03-6
PRIOR FILING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-16
PRIOR FILING DATE: 2000-03-18
PRIOR FILING DATE: 2000-03-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
PRIOR FILING DATE: 2000-01-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h NAME/KEY: misc_feature

LOCATION: 1, 2, 3, 2940, 2941, 2942, 2943, 2944

OTHER INFORMATION: n = A,T,C or G

US-10-357-930-24573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 24573, Application US/10357930 Publication No. US20040259086A1 GENERAL INFORMATION:
APPLICANT: Schlegel. Robert APPLICANT: Endege, Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                1117 GACAACCAACA 1129
                                                                                                                                                                                                                                                                                                                                                                 898 AATGAAGGAAGAA 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 24573
LENGTH: 2944
                                                                                                                                                                                                                                                                                                              1057
                                                                                                                                                                                                            997
                                                                                                                                                        778
                                                                                                                                                                                                                                                               838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
```

g ò g ò

```
477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                     61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                     reraggaaraaagaragregaagaarreregeccarcaagaagrecragaagreargar 120
                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                               CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 GAATTTGTTGACCACACGATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGATGAC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 caaciacircaaaagrarircirrcagarrarraarccaarircgarirrcicacacrcac 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CIGIGGCCIGGAAAAICAGAIGIGGACCAACTITAICIGAIAAICAGAACACTAGGAAAA 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 craarrecaagacaccarrirraraaaarccrgrgrrrcrgagagagara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT 7/7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721 CCTGAAATCAAGGAATCAGAACCTCTTGAAAGACGCTATCCCAAGCTCTCAGAAGTTGTG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGAACTICATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781 ATAGATTTAGCAAAGAAATGCTTACATGTTGACCCAGACAAAAGGCCCTTCTGTGCTGAG 840
                                                                                                                                                                9
                                                                                                                                                                                     ATGGAAAAAATATGAGAACCTTGGATTGGTTGGAGAGGAGTTATGGAATGGAATGGAATGAAG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                          GACAAAATGGTTAAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGCAACTGAGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                   AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACGAT
                                                                                                                              Gaps
                                                                                                                             3;
                                                                                       Score 287; DB 16; Length 1701;
Pred. No. 8.7e-65;
); Mismatches 350; Indels 3
                                                                                       Query Match 30.4%; Score 287; Best Local Similarity 59.1%; Pred. No. 8. Matches 510; Conservative 0; Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    crecracaccargarirerirea 863
; LENGTH: 1701
; TYPE: DNA
; ORGANISM: Orcytolagus cuniculus
US-10-174-794-5
                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

Search completed: April 22, 2005, 06:44:21 Job time : 3584.63 secs

THIS PAGE BLANK (USPTO)

```
JS-09-671-050-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-671-050-11
                                                                                                                                                                                                                                                                                    131
120.4
117.2
112.4
112.4
112
112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           영 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1681, Applications of Applications 5, Applications 3, Applications 3, Applications 6, Applications 6, Applications 6, Applications 6, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7, Applications 7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 13, Appl
Sequence 112, Appl
Sequence 2154, App
Sequence 2154, Appl
Sequence 3, Appli
Sequence 115, Appl
Sequence 4802, Ap
Sequence 4802, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Appli
Sequence 9, Appli
Sequence 3, Appli
Sequence 11, Appli
Sequence 1, Appli
                                                                                                                                                                                    April 21, 2005, 20:27:40 ; Search time 178.912 Seconds (without alignments) 8642.674 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                        1 atggaaaagtatgaaaaatt.....aggtacttccgctcaaaagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Issued_Patents_NA:*
1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-671-050-11
US-09-671-050-5
US-09-671-050-9
US-09-671-050-9
US-09-671-050-13
US-09-671-050-11
US-09-671-050-11
US-09-671-050-11
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-628-5
US-09-11-112
US-09-11-112
US-09-11-114
US-09-11-114
US-09-11-114
US-09-11-114
US-09-11-114
US-09-11-114
US-09-11-114
US-09-11-114
US-09-113-115
US-09-113-115
US-09-113-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-013-115
US-09-919-011-117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
   GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                      US-10-766-691-11
945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          110041
110068
1819
1819
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
11177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              945
929
839
823
823
454.4
4154.4
4154.4
287
287
287
                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161.8
155.6
155.6
152.4
146.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163.4
163.4
163.4
163.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum |
Maximum |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
No.
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                               181, App
313, App
5854, Ap
1, Appli
37, Appl
37, Appl
                                                                                                                                                                                                            4323, Ap
3, Appli
4325, Ap
5, Appli
13423, A
4, Appli
1, Appli
1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                   Appl
Appl
Appl
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 AIGGAAAAGTAIGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTIGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GATCCTGTTGTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAGAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCTGTTGTTAAGAAAATAGCACTAAGAAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                          Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedinence Sedine
                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, Glenn
APPLICANT: Friedrich, Glenn
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Gambrowicz, Brian
APPLICANT: Gambrowicz, Brian
APPLICANT: Gambrowicz, Brian
APPLICANT: Gambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
FILE REPRENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 1999-09-08
PRIOR FILING DATE: 1999-09-08
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11
LENGTH: 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 945;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 945; DB 4; L. larity 100.0%; Pred. No. 6.8e-258; Conservative 0; Mismatches 0;
US-09-023-655-1373
US-09-949-016-181
US-09-620-3120-313
US-09-1849-016-5854
US-08-154-915-1
US-08-154-915-1
US-08-46-361A-37
US-08-46-361A-37
US-09-46-361A-37
US-09-48-796A-4325
US-09-248-796A-4325
US-09-48-796A-4325
US-09-48-796A-4325
US-09-48-796A-4325
US-09-801-861-4
US-09-801-861-4
US-09-801-861-4
US-09-801-861-4
US-09-801-861-4
US-09-801-861-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11, Application US/09671050; Patent No. 6716616
    1161
1165
1166
11089
11089
11089
11002
11002
11074
11074
11074
11308
1308
1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
    945;
    136.6
136.6
136.6
134.6
134.6
134.6
134.6
134.6
```

ö

0; Gaps

0; Indels

Matches 929; Conservative 0; Mismatc	. 1	Db 61 TGCAGAAACAAAACTTGGACAAGGTAGTA		181	241			421	481	Db 541 TCAGTCGATATAGGCCTATTGGTTGTGTTTTGTTGTTGTTTTGTTGTTGTTGTTGT	Qy         601         TGGCCTGGAAAATCAGATGTGGACCAACTT           Db         601         TGGCCTGGAAAATCAGATGTGGACCAACTT	Qy         661 ATCCCAAGACATCAATCTATAAAAGT           Db         661 ATCCCAAGACATCAATCAATCTTTAAAAGT	Qy         721 GAGCCAGAAGACATGGAAACTCTTGAGGAA	DD 781 AACTICATGAAGGGGGTGICIGAAGATGAAT QY 841 CIGCAGAGCICCTACITIGAITCITITCAA	Db 841 CTGGAGAGCTCCTACTTTGATTCTTTTCAA		Db 901 GAAGGAAGAAAAAGAAGACGCCAACAGGT 9 RESULT 3 US-09-671-050-9	; Sequence 9, Application US/09671050 ; Patent No. 6716616 ; GENERAL INFORMATION: ; APPLICANT: Donoho, Gregory
301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360 		421 AAGATTIGIGACTICGGGITTIGCACAAAITCIGATICCAGGAGATGCCTACACCGATTAT 480	481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540 	541 TCAGTCGATAIATGGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCACTG 600 	601 IGGCCIGGAAAATCAGAIGTGGACCAACTITATCIGATAATCAGAACACTAGGAAAATTA 660 	661 ATCCCAAGACATCAATCATTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT 720 	721 GAGCCAGAAGACATGGAAACTCTTGAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTG 780 	781 AACTICAIGAAGGGTGTCIGAAGAIGAATCCAGAIGACAGATTAACCTGTICCCAACIC 840 	841 CTGGAGACTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGGAAAAGGAAAT 900	GAAGGAAGAACAGAAG	901 GAAGGAAGAACAGAAGACGCCAACAGGTACTTCCGCTCAAAAGT 945	RESULT 2 NO.09-671-050-5 Sequence 5, Application US/09671050 Patent No. 6716616	) APPLICANT: Donoho, Gregory; APPLICANT: Turner, C. Alexander Jr.; APPLICANT: Nehls, Michael	TILE OF INVENTION: 0.1001001 Human Kinase Processis and ITTLE OF INVENTION: 0.1001001 Human Kinase Processis and ITTLE REFERENCE: LEX-0046-USA	CURRENT APPLICATION NUMBER: US/09/671,050 CURRENT FILING DATE: 2001-06-11 PRIOR APPLICATION NUMBER: US 60/156.511	PRIOR FILING DATE: 1999-09-28 NUMBER OF SEC ID NOS: 13	SEQ INTEREST FABRUAGE OF WINDOWS VERBION 4.0 SEQ IN 0 5 LENGTH: 972 TYPE: DNA ORGANISM: homo sapiens	-09-671-050-5 Query Match Best Local Similarity 100.0%; Pred. No. 2.4e-253;

```
CAGGAGAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                AGCTGGAAAGAACCCAAATGGAGTTGCTGAT 300
                                                                                                                                                                                                                            ACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                 AACTICTIGIGGGGGATACICAGTAICGITCT 540
                                             FAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                    CAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                                                                                                         AAATATICTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                      TCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                   TCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                             TITIGCAGAGCTCCTGACAGGCCAGCCACTG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTATCTGATAATCAGAACACTAGGAAAATTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAGTICTCAGAIGTICAICCTGIGGCTCTG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCAGATGACAGATTAACCTGTTCCCAACTC 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGGCCCAAATTAAAAGAAAAGCACGTAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAACGGGTTTTTCCATGGCATCAGTATACCT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAGAGGCTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              929
```

```
61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
 841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 900
                                                                                                                                                                                          864
                                                                                                                                                                                                           901 AIGAAICCAGAIGACAGAITAACCIGIICCCAACICCTGGAGAGCICCTACIIIGAIIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                         804
                                                                                                                                                                                                                                                           9
                                                                           781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:

APPLICANT: Donobo, Gregory

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Friedrich, Glenn

APPLICANT: Sands, Arthur T.

TITLE OF INVENTION: No. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same

FILE REPERBRUE: LEX-0046-USA

CURRENT APPLICATION NUMBER: US/09/671,050

CURRENT FILING DATE: 2001-06-11

PRIOR PILING DATE: 1999-09-28

NUMBER OF SECOID NOS: 13

SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.1%; Score 823; DB 4; I
90.6%; Pred. No. 2.9e-223;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                 1021 CAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                              925 CAGGTACTTCCGCTCAAAAGT 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 3, Application US/09671050; Patent No. 6716616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 87.1
Best Local Similarity 90.6
Matches 929; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-671-050-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                         745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                            805
                                                                                                                                                                                                                                                             865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 3
                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                        ò
                                                                                셤
                                                                                                                  ò
                                                                                                                                                     8 8
                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGAGATGCCTACACGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGAAACAAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GATCCTGTTGATAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAŢ 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                561 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----AGGAAATTAATCCCAAGACATCAATCATTT 684
                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG
                                                                                                                                                                                                                                                                                                                                                                                 96;
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Fitedrich, Glenn
APPLICANT: Fitedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: No. 6716616e1 Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 2001-06-11
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
LENGTH: 1041
                                                                                                                                                                                                                                                                                                                                             Length 1041;
                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                             88.8%; Score 839; DB 4; L
90.8%; Pred. No. 8.3e-228;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 90.8'
Matches 945; Conservative
                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: homo sapiens
US-09-671-050-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
```

SOFTWARE: FastSEQ for Windows Version 4.0	0.00   0.00
301   GGAGTGATCAAAAGCGTATTATGGCAAACATTCAAGCTCTTAATTTCTGTCATATACAT   360   361   36	1 200 22 200 22 200

ઠે

ઠે

Š

ò

8

```
61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                         61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATCCTGTTGAAAAAAAAGACACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GATCCTGTTGTGAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCAATTTAGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                        AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGCTCTTATGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTT
                               181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/09671050

Sequence 7, Application US/09671050

Patent No. 6716616

GENERAL INFORMATION:
APPLICANT: Donoho, Gregory
APPLICANT: Nehls, Michael
APPLICANT: Priedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
ITLE OF INVENTION: No. 67166161 Human Kinase Proteins and
ITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT FILING DATE: 2001-06-11
PRIOR APPLICATION NUMBER: US/09/671,050

CURRENT FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 48.1%; Score 454.4; DB 4; Length 594; Best Local Similarity 99.8%; Pred. No. 7.8e-119; Matches 455; Conservative 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                            AAGATTTGTGACTTCGGGTTTGCACAAATTCTGAGT 456
                                                                                                                                                                                                                                                        AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 594
TYPE: DNA
ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                       RESULT 7
US-09-671-050-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-671-050-7
                                                                                                                                                          301
                                                                                                                                                                                          361
                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
181
                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                               중
음
                                                                                                                          Š
                                                                                                                                                  g
                                                                                                                                                                                   ò
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                        ઠે
1038 CCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTA 1097
                                                                                                                1337
                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                            738
                                                                                                                                                                                                                          798
                                                                                                                                                                                                                                                                                          828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGAAACAAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                              .098 GAGACGGGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCA
                                                                                                                                                            ATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAA
                                                                                                                                                                                                                        ACTCTTGAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGT
                                                                                                                                                                                                                                                        1278 ACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGT
                                                                                                                                                                                                                                                                                                                                                        .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 48.1%; Score 454.4; DB 4; Best Local Similarity 99.8%; Pred. No. 7.5e-119; Matches 455; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09671050
Patent No. 6716616
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1458 CGCCAACAGGT 1468
                                                                                                                                                                                                                                                                                                                                                                                                                      919 CGCCAACAGGT 929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: homo sapiens
US-09-671-050-1
                                                                                                                                                            619
                                                                                                                                                                                                                          739
                                                                                                                                                                                                                                                                                          799
                                                                                                                                                                                                                                                                                                                                                         859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17
                               651
                                                                                              651
                                                                                                                       g
                                                                                                                                                                                     g
                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

240

δ

ઠે

ò

us-10-766-691-11.rni

셤 ò

g ò

```
657
                                                                                                                                                                                                                                                                                                                                                                               811
    cccccccircarcirricacaarricacrererriricacreacererrerricacererres
                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                 658 TTAATCCCAAGACATCAATCTATAAAAGTAACGGGTTTTTCCATGGCATCAGTATA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGCACGT 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  crerrecarccaratrirgaaacarcagagaaragaggarrrggcaaaagaacac 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCTGTTGATTAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                              CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAACACTAGGAAAA
                                                                                                                                                                                         CTGTGGCCAGGAAAATCGGATGTGGATCAGCTGTATCTGATTAGGAAGACCTTGGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cresegericeraladescriererecacaresaceracrealadescreaesacae
                                                                        ccadacccroaadarariccaaccroacrirgaarraaaarrcccaaacarcrorrarccrocc
                                                                                                                                                                                                                                                                                          692 CTCATTCCTAGGCACCAGCAAGTGTTTAGCACGAATCAGTACTTCAGTGGAGTGAAAATT
                                                                                                                                                                                                                                                                                                                                  CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATGTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 reraggarradaenreregaagaarreregecenteaagaerreeragaagrear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACAAAATGGTTAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGCAACTGAGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 287; DB 3; Length 17
Pred. No. 4e-71;
0; Mismatches 350; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/09/411,628
EARLIER PILING DATE: 1999-10-01
EARLIER PILING DATE: 1999-10-02
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FASTESQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5, Application US/09411628
Patent No. 6428994
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Orcytolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 59.1%;
Matches 510; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        932 AACAAACCAACAA 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               898 AATGAAGGAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 5
LENGTH: 1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-411-628-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-411-628-5
                                                                                                                   572
                                                                                                                                                              598
                                                                                                                                                                                                    632
                                                                                                                                                                                                                                                                                                                                                                           752
                                                                                                                                                                                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    872
                                                                                                                                                                                                                                                                                                                                     718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                   ò
                                                                                                       g
                                                                                                                                                         ઠે
                                                                                                                                                                                         g
                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                 원
                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                         ASSOCIATED
OF DETECTION AND USES THEREOF
                                                                               361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                             AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 GAATACTGTGATGACTTTTAAATGAGCTGGAAAGAAACCCCAAATGGAGTTGCTGAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421 AAGATITIGIGACTICGGGTTTGCACAAATTCTGATT---CCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332 carcrcgigaagagaraacrrggaagacacrgcaagcrgraarrrrrgccaraaacac 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392 AATTGCATACATAGAGACGTGAAGCCAGAAATATCCTCATCACGAAACATTCCGTGATT 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32 ATGGAGAAGTATGAAAAATTGGAAAATTGGAGAAGGATCCTATGGAGTTGTTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rigradaadadeecacaceeercacarrigreeccarcaagaagrircreeaarcagaagar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCCTGTCATAAAAATTGCCCTTCGGGAAATCCGAATGCTCAAGCAACTCAAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                272 GAATATIGIGACCACACAGTICICCATGAGTIGGACAGATACCAAAGAGGGGTACCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCTTTGTGACTTTGGATTTGCTCGGCTTTTGACTGGACCGAGTGACTACTATACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 AIGGAAAAGTAIGAAAAATTAGCTAAGACTGGAGAAGGGTCTTAIGGGGGTTGTAITCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478 TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:

JOHNERAL INFORMATION:

TITLE OF INVENTION: POLYMORHISMS IN KNOWN GENES ASS(
TITLE OF INVENTION: POLYMORHISMS IN KNOWN GENES ASS(
TITLE REFERENCE: CLOO1307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FASLSEQ for Windows Version 4.0

SEQ ID NO 1681
                                                                                                                                AAGATITGIGACTICGGGTITGCACAAATICTGATI 456
                                                                                                                                                                         AAGATTTGTGACTTCGGGTTTGCACAATTCTGAGT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 415.4; DB 4;
Pred. No. 1.3e-107;
0; Mismatches 301;
                                                                                                                                                                                                                                                                              Sequence 1681, Application US/09949016
Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 66.7%;
Matches 609; Conservative (
                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-1681
  301
                                          361
                                                                                                                                421
                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           452
```

g ò 셤 ò q ò 임 ò 셤 g

ò

ò 셤 ò

```
121
                                                                               121
                                                                                                                                                                        241
                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                          538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                          g
                                                                                                                                                                                                               8 6
                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                 ò
                                                 ద
                                                                       Š
                                                                                                  셤
                                                                                                                         8
                                                                                                                                                                       8
                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                  6 8 6
                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                  ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                   537
                                                                                                               420
                                                                                                                                     477
                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                    999
                                                                                                                                                                                                                                                                                                                                                                         777
                                            360
                                                                                         420
                                                                                                                                                            480
                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                              661 CTAATTCCAAGACACCAGGAGCTTTTTATAAAATCCTGTGTTTGCTGGAGTAAGGTTG 720
                                                                  301 CAAGTAGTTCAAAAGTATTTGTTTCAGATTAATTAATTGGAATTTGTCACAGTCAC 360
                                                                                                                                                                                                                                 CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA 657
                                                                                                                                                                                                                                                                                                                           TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA 717
                                                                                                                                                                                                                                                                                                                                                                                              721 CCTGAAATCAAGGAATCAGAACCTCTTGAAAGACGCTATCCCAAGCTCTCAGAAGTTGTG 780
                                                                                                                                                                                                                                                                                                                                                                                                                                           181 ATAGATTTAGCAAAGAAATGCTTACATGTTGACCCAGACAAAAGGCCCTTCTGTGCTGAG 840
GAATTTGTTGACCACACGATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGATGAC 300
                                                                                                                                                                                                                                               AAAGCTGTGGATGTGGGCCCATTGGTTGTCTGGTAACTGAAATGCTCATGGGGAACCC
                                                                                                      AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACGAT
                                                                                                                                                                                                   CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                     CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                            GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                       AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                            TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES;
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/10/174,794
CURRENT FILING DATE: 2002-06-18
PRIOR APPLICATION NUMBER: US/09/411,628
PRIOR APPLICATION NUMBER: US/09/411,628
PRIOR PILING DATE: 1999-10-01
PRIOR PILING DATE: 1999-10-02
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NOS: 16
FENCTAL 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; DB 4; Length 1701; 4e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 30.4%; Score 287; DB 4; Length 17 Best Local Similarity 59.1%; Pred. No. 4e-71; Matches 510; Conservative 0; Mismatches 350; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCTGGAGAGCTCCTACTTTGA 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       crecracaccargarireire 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :-10-174-794-5
Sequence 5, Application US/10174794
Patent No. 6664086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) ORGANISM: Orcytolagus cuniculus US-10-174-794-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 1701
                                            301
                                                                                         361
                                                                                                               361
                                                                                                                                     421
                                                                                                                                                             421
                                                                                                                                                                                    478
                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                              598
                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                           658
                                                                                                                                                                                                                                                                                                                                                                         718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                          g
                                                                                                           셤
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                              g
               a
                                    જે
                                                                                     8
                                                                                                                              ે
                                                                                                                                                       g
                                                                                                                                                                                   ò
                                                                                                                                                                                                    ద
                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                          ર્જ
                                                                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA

ò

```
61 reraegaaraaagaragregaagaarreregecearcaagaagrecragaaagreargar 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACAAAATGGTTAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGCAACTGAGGCAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTTATGTGTTTTTGGATTTTGCACGGACACTGGCAGCTCCCGGAGGGTTTACACTGAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATGTGGCAACTCGATGGTACAGAGCTCCAGAACTACTGGTTGATGTCAAGTATGGC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cremmicresis de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta del comparta del comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta del comparta del comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta de la comparta del la comparta della comparta della comparta della comparta della della comparta della comparta della comparta della comparta della comparta della comparta della comparta della comparta della comparta della comparta della comparta della comparta della com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 CAAGTAGTTCAAAAGTATTTTGTTTTCAGATTAATTGGAATTGGATTTTGTCACAGTCAC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACCGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661 CTAATTCCAAGACACCAGGAGCTTTTTTATAAAAATCCTGTGTTTGCTGGAGTAAGGTTG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cergaaarcaaggaarcagaacererreaaagacgerarcecaagcreecagaagreer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781 ATAGATTTAGCAAAGAAATGCTTACATGTTGACCCAGACAAAAGGCCCTTCTGTGCTGAG 840
Arccadada an arccada an arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccada arccad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                         TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-411-628-3

Sequence 3, Application US/09411628

Sequence 3, Application US/09411628

BERNEAL INFORMATION:
TITLE OF INVERMION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVERMION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707

CURRENT APPLICATION NUMBER: US/09/411,628

CURRENT PAPLICATION NUMBER: US 60/102,906

EARLIER APPLICATION NUMBER: US 60/102,906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCTGGAGAGCTCCTACTTTGA 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Crccracaccargarrrcrrrca 863
```

```
61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   489 GAATTTGTTGACCACACGATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGATGAC 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                549 caadracararararricirricacarrarracaarricaarricaarricararacaacacae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAGGGGTCTTATGGGGTTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GATCCTGTTGATAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       309 TGTAGGAÁTAAAGATAGTGGAAGAATTGTGGCCATCAAGAAGTTCCTAGAAAGTGATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369 GACAAAATGGTTAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGCAACTGAGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTGTATTCACAGAGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGCTGTGGATGTGTGGGCCATTGGTTGTCTGCTAACTGAAATGCTCATGGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           609 AATATCATACATAGAGATATAAAGCCAGAGAATATATTGGTCTCCCAGTCTGGCGTTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGTTATGTATTTTAGATTTTGCACGACACTGGCAGCTCCCGGAGAGGTTTACACTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                             APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: ESQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/10/174,794
CURRENT FILING DATE: 2002-06-18
PRIOR FILING DATE: 1999-10-01
PRIOR APPLICATION NUMBER: US 60/102,906
PRIOR APPLICATION NUMBER: US 60/102,906
NUMBER OF SEQ. ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches 350; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 287; DB 4;
Pred. No. 5.4e-71;
            1089 CTCCTACACCATGATTTCTTTCA 1111
                                                                                                         Sequence 3, Application US/10174794
Patent No. 6664086
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Orcytolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 59.1%;
Matches 510; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; NAME/KEY: CDS
; LOCATION: (249)...(1949)
US-10-174-794-3
                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 3
LENGTH: 3080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969 ccidaaarcaagaarcadaaccicirdaaagacgrarcccaaagrcrcagaagrigrg 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .029 ATAGATTTAGCAAGAAATGCTTACATGTTGACCCAGACAAAAGGCCCTTCTGTGTGCTGAG 1088
                                                                                                                                                                                                                                                                                                                                                                    TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                 ATGGAAAAATATGAGAACCTTGGATTGGTTGGAGAGGGAGTTATGGAATGGTGATGAAG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                489 GAATTTGTTGACCACACGATTCTTGATGACTTGGAACTCTTTCCAAATGGACTAGATGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                            reraggaaraaggaagaarreregecearcaagaarreragaagrecragaaagregar 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACAAAATGGTTAAAAAATTGCTATGCGAGAAATCAAGTTACTAAAGCAACTGAGGCAT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  788
                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   658 TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       909 ciaairiccaadacaccascagagciririraraaaaarccroicirirgcricaagaaaaagarig 968
                                                                                                                                                                                                                                                                                             ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAAGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 609 AATATCATACATAGAGATATAAAGCCAGAGAATATATAGGTCTCCCAGTCTGGCGTTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        549 CAAGTAGTTCAAAAGTATTTGTTTTGAGATTAGGAATTGGATTTTGTCACAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               789 AAAGCIGIGGAIGIGIGGCCAIIGGIIGICIGGIAACIGAAAIGCICAIGGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               crerrricciedagacricreararrearcaecrirrarcricarrareagererrrageraar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                718 CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           778 CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                               3.
                                                                                                                                                                                                                    Length 3080;
                                                                                                                                                                                                                  Score 287; DB 3; Length 30
Pred. No. 5.4e-71;
0; Mismatches 350; Indels
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 3080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCTGGAGAGCTCCTACTTTGA 860
                                                                            TYPE: DNA ORGANISM: Orcytolagus cuniculus
                                                                                                                                                                                                                Query Match
Best Local Similarity 59.1%;
Matches 510; Conservative
                                                                                                                   FEATURE:
NAME/KEY: CDS
: LOCATION: (249)...(1949)
US-09-411-628-3
                                                                                                                                                                                                                                                                                                                                 249
                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

300

420 668 477

à

8

8

ò

597 848

428

Gaps

3;

Length 3080;

셤 8 셤 ઠ 유 ð g ઠ 셤

```
CTATTTCCTGGAGATTCTGATATTGATCAGCTATATCATATTATGATGTGTTTAGGTAAT 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTAATTCCAAGGCATCAGGAGCTTTTTAATAAAAATCCTGTGTTTGCTGGAGTAAGGTTG 1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGAAATCAAGGAAAGAGAACCTCTTGAAAGACGCTATCCTAAGCTCTCTGAAGTGGTG 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1156 ATAGATTTAGCAAAGAAATGCTTACATATTGACCCCGACAAAAGACCCTTCTGTGCTGAG 1215
                                                                                                                                                                                                                                                          855
                                                                                                                                                                                                                                                                                                                                   537
                                                                                                                                                                                                                                                                                                                                                                                                            915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT 777
                                                                                                           736 AATATCATACACAGAGATATAAAGCCAGAGATATATAGTCTCCCAGTCTGGCGTTGTC 795
                                                                                                                                                                                 AAGATTTGTGACTTCGGGTTTGCACAAATTCTG---ATTCCAGGAGATGCCTACACCGGAT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       916 AAGGCTGTTGATGTGTGGGCCATTGGTTGTCTGGTAACTGAAATGTTCATGGGGGAACCC 975
                                                                                                                                                                                                                                                                                                                                                                              AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                          AAGCTATGCGATTTTGCGTCGCGAACATTGGCAGCTCCTGGGGGGGTTTATACTGAT
                                                                                                                                                                                                                                                                                                                                   TATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGAACTICATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 9, Application US/08874347;
Sequence 9, Application US/08874347;
Patent No. 5863741
GENERAL INFORMATION:
APPLICANT: Limper, Andrew H.
APPLICANT: Leof, Edward B.
APPLICANT: Thomas, Charles F.
APPLICANT: Gustafson, Michael P.
TITLE OF INVENTION: CDC2 PROTEIN KINASE FROM PNEUMOCYSTIS
TITLE OF INVENTION: CARINII
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS: 26
CORRESPONDENCE ADDRESS: 16
STREET: 60 South Sixth Street, Suite 3300
CITT: Minneapolis
CITTLE OF INVENTION: CARINII
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS: 7100
CITTLE OF INVENTION: CARINII
COURTY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM_TYPE: Diskette
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
SOFRWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/874,347
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Ellinger, Mark S.
REGISTRATION VINDBER: 34,812
REFERENCE/DOCKET NUMBER: 07039/055001
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCTACACCATGATTTCTTTCA 1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCCTGGAGAGCTCCTACTTTGA 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 13-JUN-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     612-288-9696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
TELEFAX: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: M
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-874-347-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1096
                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                   478
                                                                                                                                                                                                                                                                                                                                                                                                            856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          838
                                      361
                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      සු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                            g
                                                                                                                                                              ે 
                                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NGS: 207012

SOFTWARE: FRASESO for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                      969 CCTGAAATCAAGGAATCAGAACCTCTTGAAAGACGCTATCCCAAGCTCTCAGAAGTTGTG 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1029 aragarrragcaaagaaargcrracargrrgaccaagacaaaaggcccrrcrgrgag 1088
                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  555
                                                                                                                                                                                                                                                                                                 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                       909 CTAATTCCAAGACACCAGGAGCTTTTTTATAAAAATCCTGTGTTTGCTGGAGTAAGGTTG 968
                                                                                                                                                                                                                                                                                                                                                                                                                                               778 CTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAA 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376 ATGGAAAATATGAAAACCTGGGTTTGGTTGGAGAGGGAGTTATGGAATGGTGATGAAG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGAAACAAACCCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAATTTGTTGACCACACACTTCTTGATGACTTGGAGCTCTTTCCAAATGGACTAGACTAC 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     676 caagiragircaaaagrarrigirricagarrarraarggaarriggairrigicacaggcac 735
   CTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAA 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                  TTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATA
                                                                                                                                                                                                                                                                                                 CCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCT
                                                                     cristriciosas de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata del contrata de la contrata del contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata del contrata de la contrata del contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata de la contrata del contrata de la contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del contrata del con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436 TGTAGGAATAAAGATACTGGAAGAATTGTGGCCATAAAGAAGTTCTTAGAAAGTGACGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      496 GACAAAATGGTTAAAAAGATTGCAATGCGAGAAATCAAGTTACTAAAGCAACTTAGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1794;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 30.0%; Score 283.8; DB 4; Best Local Similarity 58.9%; Pred. No. 3.3e-70; Matches 508; Conservative 0; Mismatches 352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Crccracaccargarircirica 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              838 CTCCTGGAGAGCTCCTACTTTGA 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2083, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -09-949-016-2083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JS-09-949-016-2083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 2083
598
                                                                         849
                                                                                                                                                  658
                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
```

셤

ò ద ò 요 8 요 Š g ઠે

ò

```
832 TCCCAACTCCTGGAGGCTCCTACTTTGATTCTTT
                                                                                                                                   Sequence 9, Application US/09093522
Patent No. 6015700
GENERAL INFORMATION:
APPLICANT: Limper, Andrew H.
APPLICANT: Leof, Edward B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Ellinger, Mark S.
REGISTRATION NUMBER: 34,812
                                                                                                                                                                                                                 Leof, Edward B.
Thomas, Charles F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION:
TELEPHONE: 612-335-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: Coding Sequence LOCATION: LOCATION: 1...900 OTHER INFORMATION: US-09-093-522-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.2%;
52.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 903 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 52.3
Matches 458; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 612-288-9696
                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Ri
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                        55402
                                                                                                                          US-09-093-522-9
                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
           ઠ
                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                         <u>ښ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                61 GCAÁAGGÁTCTTGAAAGTGGTACAATTGTAGCTCTTAÁGAAATCCGATTÁGAAGCAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GATCCTGTTGAAAAAAAAAAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                              61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GATGAGGGGGTTCCTAGTACAGCAATTCGTGAGATATCACTTTTGAAAGAGATGCACAAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGCAGAAATGATTAAAAAGTTTATGTCACAACTTGTATCAGGTGTTAAATATTGTCAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 GAATTICTTGATCTTGATTTAAAAGTATATGAATAGTATTCCAAAGGACATGATGCTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            415 ATAATCAAGATTTGTGACTTCGGGTTTGCA---CAAATTCTGATTCCAGGAGATGCCTAC 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601 AAGCCATTATTTCCAGGTGATTCTGAAATTGATGAATATTTAGAATATTTAGAATATTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               831
                                                                                                                                                                                                                                                                                                                                                 1 ATGGAGCAATATCAGAGGTTAGAGAAGATTGGAGAACTTATGGAGTTGTTTATAAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           652 GGAAAATTAATCCCAAGACATCAATCTATTAAAAGTAACGGGTTTTTCCATGGCATC 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 GATAATGTTGTAAGACTTTTGAATATTCATCAAGAGTCACGTTTATATCTTGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  355 ATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 AATCTTAAATTAGCAGATTTTGGGCTTGCAAGGGCGTTTGGTGTTCCATTGCGTGGTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 ACTCATGAAGTTGTTACACTTTGGTATCGTGCTCCAGAAGTTCTTTTAGGTGGTCGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 TATGCAACAGCGCTTGATATATGGAGCATTGGATGTATTTTTGCAGAAATGGCTACAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 GGGACTCCAGATGAAATTCTTGGCCTGGTATTACATCTTATCCGGATTTTAAGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   712 AGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         772 GTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            775 GATGGAATAGATTTATTACAGAAATGTCTTAGATATTATCCTGCTGAACGTATTAGCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     592 CAGCCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTA
                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721 TTTCCAAAATGGTCACCA----AAAAATCTTGGAGAATTAATTACAGAACTTGATAGT
                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                  Length 903;
                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                            Score 171.8; DB 2;
Pred. No. 1.4e-38;
0; Mismatches 402;
                                                                                                                                                                                                                                              Query Match
Best Local Similarity 52.3%;
Matches 458; Conservative (
     9
                                                                                                                                                   NAME/KEY: Coding Sequence
INFORMATION FOR SEQ ID NO: 9
SEQUENCE CHARACTERISTICS:
LENGTH: 903 base pairs
TYPE: nucleic acid
STRANUBENESS: aingle
TOPOLLGY: linear
                                                                                                                                                                    LOCATION: 1...900
CTHER INFORMATION:
US-08-874-347-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            532
                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
```

```
61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GCAAAGGATCTTGAAAGTGGTACAATTGTAGCTCTTAAGAAAATCCGATTAGAAGCAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATCCTGTTGATAAAAAAAAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GATGAGGGAGTTCCTAGTACAGCAATTCGTGAGATATCACTTTTGAAAGAGATGCACAAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGAGCAATATCAGAGGTTAGAGAAGATTGGAGAAGGAACTTATGGAGTTGTTATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 903;
                                                                                                                                                                                                                                                                                                     APPLICANT: Thomas, Charles F.
APPLICANT: Thomas, Charles F.
APPLICANT: Gustafson, Michael P.
TITLE OF INVENTION: CDC2 PROTEIN KINASE FROM PNEUMOCYSTIS
TITLE OF INVENTION: CARINII
NUMBER OF SEQUENCES: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 1.4e-38;
0; Mismatches 402;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: DOS
CORRENT APPLICATION DATA:
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,522
FILING DATE: 08-JUN-1998
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/874,347
FILING APPLICATION NUMBER: 08/874,347
ATTORNEY AGENT INFORMATION:
NAME: Ellinger, Mark S.
835 AAAAAAGCTCTCGATCATCCTTATTTTGATGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEE: Fish & Richardson P.C., P.A.
: 60 South Sixth Street, Suite 3300
Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 171.8;
Pred. No. 1.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07039/055002
```

```
294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      651
                                        181 GATAATGTTGTAAGACTTTTGAATATAATTCATCAAGAGTCACGTTTATATCTTGTTTTT 240
                                                                                                                      GAATTTCTTGATCTTGATTTAAAAGTATATGAATAGTATTCCAAAGGACATGATGCTT 300
                                                                                                                                                                                           361 TCTCATCGTATTCTTCATCGTGACTTGAAAACCACAAATCTTCTTATAGATCGAGAAGGA 420
                                                                                                                                                                                                                                                                                                                                                               481 ACTCATGAAGTTGTTACACTTTGGTATCGTGCTCCAGAAGTTCTTTTAGGTGGTCGACAA 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              712 AGTATACCTGAGCCAGAAGACATGGAAACTCCTTGAGGAAAAGTTCTCAGATGTTCATCCT 771
                                                                                                                                                                 295 GCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCAT 354
                                                                                                                                                                                                                                                   355 ATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGA 414
                                                                                                                                                                                                                                                                                                                                                                                                                   472 ACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAG 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATGGTTCTTCAGTCGATATATGGCTATTGGTTGTGTTTTTTGCAGAGCTCCTGACAGGC 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601 aagccarrarrccaggrgarrcrgaaarrgargaaarrraagaarrragaararragaararra 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAAATTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATC 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661 GGGACTCCAGATGGAAATTCTTGGCCTGGTATTACATCTTATCCGGATTTTAAGGCAACT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721 Triccaaaargercacca----aaaarcriggagaarraarracagaacrigaragr 774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      772 GTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGT 831
                                                                                                                                                                                                                                                                                                                                   415 ATAATCAAGATTTGTGACTTCGGGTTTGCA---CAAATTCTGATTCCAGGAGATGCCTAC 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               775 GATGGAATAGATTTATTACAGAAATGTCTTAGATATTATCCTGCTGAACGTATTAGCGCT 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      592 CAGCCACTGTGGCCTGGAAATCAGATGTGGACCCAACTTTATCTGATAATCAGAACACTA
CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                 832 TCCCAACTCCTGGAGGCTCCTACTTTGATTCTTT 866
                                                                                 241
                                                                                                                          241
                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      652
                                                                                                                                                                                                                                                                                                                                                                                                                                                       임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                               ò
                                                                                                                  셤
                                                                                                                                                               8
                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                   ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

Search completed: April 22, 2005, 01:29:34 Job time : 183.912 secs

THIS PAGE BLANK (USPTO)

Ado01536 Human cyc Ado01535 Human cyc Abv24584 Human pro Aaa29746 Rabbit KK Aaa29745 Rabbit KK Ada77658 Human 162 Adg89155 Human uro Ab112603 Drosophil Aa551208 Human los Adi57213 Human NKI Aa66724 Polymucle Ab112602 Drosophil

ACA42574 Human dia Aaz51207 Rat lost Aaz1206 Rat lost Aas70329 DNA encod Aaf44672 Novel pro Adi29370 Human MAR Aax07476 Pneumocys

Ado01537 Human cyc Aa237835 Cyclin-de Aav71074 Green flu Aav71073 CDK2-gree Abz83372 Toxicolog Abg60787 Human 10C

seq

80

Minimum I Maximum I

••

Jatabase

Perfect score:

Run on:

Sequence:

Scoring table:

Searched:

```
/note= "The coding region does not include stop codon" /partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zambrowicz B;
                                                                                                                                                                                                                                                                                                                                                                  Human; kinase; gene therapy; bioreactor; mental disorder;
biological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Friedrich G,
                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
1. .945
/*tag= a
/product= "Human kinase #6"
                                                                                                                                                                                                                                                ALIGNMENTS
                                   AAA29745
ADC77658
ADQ89155
ABL12603
AAZ51208
                                                                              ADI57213
AAS06724
ABL12602
ACN42574
AAZ51207
AAZ51206
AAS70329
AAF44672
                                                                                                                                                    ADD129370
AAX07476
AD001537
AAZ37835
                                                                                                                                                                                         AAV71074
AAV71073
ABZ83372
ABQ60787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Turner CA, Nehls M,
                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 3; Page 33; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-SEP-2000; 2000WO-US026621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0156511P.
                                                                                                                                                                                                                                                                                            AAD03817 standard; cDNA; 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LEXI-) LEXICON GENETICS INC.
                                     13
                                                                                                                                                     12
                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                (first entry)
                           1698
3080
2095
2095
11179
11773
11773
11773
11738
11158
11158
                                                                                                                                                               903
                                                                                                                                                                                 1476
1635
1635
1024
1297
                                                                                                                                                                                                                                                                                                                                                 Human kinase cDNA #6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-266166/27.
P-PSDB; AAE00495.
WO200123579-A1
                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-SEP-1999;
                                                                                                                                                                                                                                                                                                                               19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Donoho G,
Sands AT;
AAD03817;
                                                                                                                                                                                                                                                                           RESULT 1
                                                                                                                                                                                                                                                                                     AAD03817
 υ
                                                                                                                                                                                                                                                                                                       Aad03817 Human kin
Aad03814 Human kin
Abx08936 CDNA enco
Aas06725 Polynucle
Aad03816 Human kin
Aad40328 Human kin
Ad440328 Human kin
Aa144029 Human kin
Aa14469 Novel pro
Aa129367 Human kin
Aa144670 Novel pro
Aa129368 Mouse MAR
Abx34679 Human mAR
Abx34679 Human mAR
Abx34679 Human mAR
Abx34679 Human mAR
Abx34679 Human mAR
Aa403312 Human kin
Abz77165 Human kin
Aba03312 Human kin
Aad03312 Human kin
Aad03312 Human kin
Aad03312 Human kin
                                                            April 21, 2005, 20:23:24; Search time 517.228 Seconds (without alignments) 10815.645 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                   1 atggaaaagtatgaaaaatt......aggtacttccgctcaaaagt 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                 8780412
         GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                               4390206 seqs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                            OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAD30557
ABX08936
AAD03813
AD03813
ADK71927
ADK40928
AAI64248
AAI64248
AAI64248
AAI64679
AAI64679
AAI63369
AAD03812
AAD03812
AAD03812
AAD03813
ABQ93433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAD03817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AD03814
                                                                                                                                   IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                            geneseqn2003cs:*geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                                            geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                      geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                 geneseqn2002bs:*
geneseqn2003as:*
                                                                                                                                                                                                                                                                  N_Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                                                                                                  geneseqn2003bs:*
                                                                                                                                                                                                                                                                                                       geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                                         geneseqn2002as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                            geneseqn1980s:*
geneseqn1990s:*
                                                                                                                                                                                                                                                                                             geneseqn2000s:*
                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                US-10-766-691-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1678
1083
1041
1068
1266
1429
882
911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2615
1281
1819
1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74.5
668.3
668.0
668.0
559.2
559.2
559.2
559.2
648.1
648.1
649.0
```

Score

Result No.

868.8 863

839 823 808

559.2 559.2 559.2 559.2 559.2 559.2 543.2 507

9 110 117 118 118 118 118

454.4 454.4 415.4

~

The present sequence is a cDNA encoding novel human protein (NHP) known as human kinases. The human kinases share structural similarity with cas human kinases. The human kinases of animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP concleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes : The labelled NHP polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP crocactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene

Sequence 945 BP; 323 A; 165 C; 202 G; 255 T; 0 U; 0 Other;

요 δ

ò g ò g ò g ò g ò g ð g ò a 8 g ð

ö 300 120 61 TGCAGAAACCACTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120 121 GATCCTGTTGATAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 240 240 300 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 360 99 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420 420 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT 480 480 540 540 009 900 999 9 661 ATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT 720 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGCTCTTATGGGGTTGTATTCAAA 1 AIGGAAAAGTAIGAAAAATTAGCTAAGACTGGAGAAGGGTCTTAIGGGGTTGTAITCAAA TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 601 IGGCCIGGAAAATCAGAIGIGGACCAACTITAICIGAIAATCAGAAACACTAGGAAAAITA 181 Gradcracdadarderaccdadcrccrdaacrrcrrcrdddadaracrcagrarddrig 601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA Gaps AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACCGATTAT GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT .; 0 100.0%; Score 945; DB 4; Length 945; 100.0%; Pred. No. 3.3e-244; ive 0; Mismatches 0; Indels ( Best Local Similarity 100. Matches 945; Conservative Query Match 61 121 181 181 241 241 301 361 421 421 361 481

The present sequence is a cDNA encoding novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases. More particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for streening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene

CTGGAGAGCTCCTACTTTCTTTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGTAAT 900 /\*tag= a /product= "Human Kinase #3" /note= "The coding region does not include stop codon" GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG GAGCCAGAAGACATGGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGCCCCAAATTAAAAAGCACGTAAT New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases. ä GAAGGAAGAAACAGAACGCCAACAGGTACTTCCGCTCAAAAGT 945 Zambrowicz Human; kinase; gene therapy; bioreactor; mental disorder; Friedrich G, Disclosure; Page 29-30; 38pp; English. Location/Qualifiers |. .972 Turner CA, Nehls M, AAD03814 standard; cDNA; 972 27-SEP-2000; 2000WO-US026621. 99US-0156511P. (LEXI-) LEXICON GENETICS INC /partial biological disorder; ss Human kinase cDNA #3. WPI; 2001-266166/27. P-PSDB; AAE00492. WO200123579-A1 Homo sapiens 28-SEP-1999; 19-JUN-2001 05-APR-2001. 199 781 Donoho G, Sands AT; 721 781 841 841 901 AAD03814; RESULT AAD0381 원 à 셤 à 셤 ò Ор  m

```
셤
                                                                              8
                                                                                                     셤
products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                            TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                           1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60
                                                                                                                                                                                                                                                                                                                                              TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAAATCTTGTGACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGTGATCAAAAGCGTATTATGGCAAACACTCTAAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resceresananteagareresacererraneresananteagaaareresaaaarea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCCCAAGACATCAATCATTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTICATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                     Score 929; DB 4; Length 972;
Pred. No. 6.8e-240;
                                                                                                                                                                                     Sequence 972 BP; 323 A; 172 C; 214 G; 263 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                          therapy for the modulation of NHP expression
                                                                                                                                                                                                          98.3%; Scc...
100.0%; Pred. No. c...
0; Mismatches
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                              Local Similarity
wes 929; Conserv
                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
    8888888888888888888
                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
```

```
leukaemia; immune disorder, intropia melanoma; developmental disorder; acquired immune disorder; propiona; melanoma; developmental disorder; acquired immunodeficiency syndrome; AIDS; allergy; anaemia; hypertension; asthma; Crohn's disease; rheumatoid arthritis; bursitis; atherosclerosis; cirrhosis; hepatitis; psoriasis; Cushing's syndrome; cytostatic; cancer; cholestasis; cardiant; cardiaovascular disorder; Niemann-Pick's disease; lipid disorder; fatty liver; Gaucher's disease; myocardial infarction; drug screening; transgenic animal; antiinflammatory; hepatotropic;
                   CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGTAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention relates to an isolated human kinase polypeptide (PKIN) or a biologically active/immunogenic fragment of PKIN. PKIN is useful for diagnosing, treating and preventing cancer (e.g., leukaemia, lymphoma, melanoma), an immune disorder (e.g., acquired immunodeficiency syndrome (AIDS), Addison's disease, allergy, anaemia, asthma, Crohn's disease, rheumatoid arthritis), a growth and developmental disorder (e.g. bursitis, cirrhosis, hepatitis, psoriasis, Cushing's syndrome), a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New human kinase polypeptide, useful in diagnosis, prevention and treatment of cancer, immune disorder, growth and developmental disorder, cardiovascular disorder and lipid disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ding
SR;
CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGCACGTAAT
                                                                                                                                                                                                                                                                                                                                                              Human; kinase polypeptide; PKIN-10; gene therapy; Addison's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thornton M, Yue H, Khan FA, Gururajan R, Hafalia AJA, Walia N Batterson C, Ramkumar J, Gandhi AR, Policky JL, Baughn MR; Tribouley CM, Bandman O, Nguyen DB, Lu Y, Burford N. Lal P, Yao MG, Blliott VS, Recipon SA, Kearney L, Lu DAM, Greenwald Tang YT, Xu Y, Walsh RT, Gietzen KJ, Yang J, Hillman JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
239. .1267
/*tag= a
/product= "Human PKIN-10"
                                                                                                                                                                                                                                                                                                                        Human kinase polypeptide (PKIN-10) cDNA.
                                                                          GAAGGAAGAACAGAAGACGCCAACAGGT
                                                                                                GAAGGAAGAAACAGAAGACGCCAACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypotensive; anti-HIV; enzyme; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 5; Page 183; 196pp; English.
                                                                                                                                                                                                          standard; cDNA; 1790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-2000; 2000US-022003BP.
28-JUL-2000; 2000US-0222112P.
04-AUG-2000; 2000US-022831P.
11-AUG-2000; 2000US-0224729P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-JUL-2001; 2001WO-US023092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-206083/26.
P-PSDB; AAE19152.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THORNTON M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200208399-A2
                                                                                                                                                                                                                                                                                   21-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-JAN-2002
                                                                                                                                                                                                                                               AAD30557;
                                     841
                                                                        901
                                                                                                              901
                                                                                                                                                                                                          AAD30557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (THOR/)
                                                                                                                                                                 RESULT 3
                                                                                                                                                                                                              840
```

```
cardiovascular disorder (e.g., atherosclerosis, hypertension, myocardial infarction), and a lipid disorder (e.g., fatty liver, cholestasis, darchion), and a lipid disorder (e.g., fatty liver, cholestasis, daucher's disease). Niemann-Pick's disease). PKIN is useful in a number of drug screening techniques and to analyse the proteome of a tissue or cell type. PKIN is useful for creating knockin humanised animals or transgenic generate a transcript image of a tissue or cell type. FKIN is useful for creating contains grower to generate a transcript image of a tissue or cell type, for detecting generate a transcript image of a tissue or cell type, for detecting the ct., among normal, carrier or affected individuals, and as hybridisation probes for mapping naturally occuring genomic sequences. PKIN is useful in southern or northern analysis, dot blot or other membrane-based checknologies, in PKR technologies, in dipstick, pin, multiformat enzyme linked immunosorbent (ELISA)-like assays and in microarrays utilising fluids or tissues from patients to detect altered PKIN expression. The
85666666666666655555
```

Sequence 1790 BP; 581 A; 328 C; 366 G; 515 T; 0 U; 0 Other;

1018 239 AIGGAAAAGIAIGAAAAAIIAGCIAAGACIGGAGAAGGGICIIAIGGGGIIGIAIICAAA 298 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120 299 TGCAGAAACAAAACCTCTGGACAAGTACTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 358 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 418 240 538 GGAGTGATCAAAAGCGTATTATGGCAAACACTTTCAAGCTCTTAATTTCTGTCATATACAT 360 598 420 658 480 718 540 900 838 778 99 868 720 958 ATGGAAAAGTATGAAAAATTAGCTAAAGACTGGAGAAGGGGTCTTATGGGGTTGTATTCAAA CCAAATCTTGTGAAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAATGCATTTAGTTTTT AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT Gaps GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT rcagricariarasecratriserritririseasasecrecasaseceasec GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAAACTTA ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCT GAGCCAGAAGACATGTTGAGGAAAAGTTCTCAGATGTTCATCTGTGGCTCTG ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT ; 98.1%; Score 927; DB 6; Length 1790; 100.0%; Pred. No. 3e-239; ive 0; Mismatches 0; Indels Query Match Best Local Similarity 100.0 Matches 927; Conservative 61 361 121 359 181 241 301 599 421 629 481 719 541 779 601 839 661 899 721 ò g ò g ò g ò d ò g ò Dp. ઠે g ò Ωp ò g à a ò 셤 à g

ò

```
AACTICATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC 840
                                                                                                                                                                                                                                                                   Human; ss; gene; diagnostic and therapeutic; DITHP; cancer; arteriosclerosis atherosclerosis; psoriasis; primary thrombocytopenia; auteriosclerosis anteriosclerosis; psoriasis; primary thrombocytopenia; crohn's disease; diabetes mellitus; glomerulonephritis; gout; stroke; multiple sclerosis; rheumatoid arthritis; uveitis; AIDS; allergy; acquired immunodeficiency disease; neurological disorder; epilepsy; Alzheimer's disease; dementia; mental retardation; gastrointestinal; Parkinson's disease; ulcer; cirrhosis; reproductive; infertility; endometriosis; endocrine disorder; hyperparathyroidism; hyperlipidemia; hypercholesterolaemia; hypoglycaemia; obesity; Reiter's syndrome; connective tissue disorder; osteoporosis; infection.
             CTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGCACGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jones AL;
Chen AJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dufour GE, Hillman JL,
V, Daffo A, Marwaha R,
David MH, Lewis SA;
                                                                                                          GAAGGAAGAACAGAAGACGCCAACAG 927
                                                                                                                                                                                                                                                cDNA encoding human DITHP protein #6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Altus CM, Is B, Flores Veralta CH,
                                                                                                                                                                            ABX08936 standard; cDNA; 1678 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001US-0261622P.
2001US-0261864P.
2001US-0261865P.
2001US-0262164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-JAN-2002; 2002WO-US001009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001US-0262208P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0263063P.
2001US-0263064P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001US-0262207P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0262599P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001US-0262662P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-0262760P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001US-0262215P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001US-0263102P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0263065P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lincoln SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Liu TF, Harris
Gerstin EH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-040680/03
P-PSDB; ABU05290.
                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200279473-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-JAN-2001;
17-JAN-2001;
17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JAN-2001;
19-JAN-2001;
19-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-2001;
19-JAN-2001;
19-JAN-2001;
                                                                                                                                                                                                                         21-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JAN-2001;
17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dam TC, Li
Chang SC,
781
                                             841
                                                                                                                   1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SR.
                                                                                            901
                                                                                                                                                                                                    ABX08936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Panzer
                                                                                                                                                                RESULT 4
                                          ò
                                                                  셤
                    g
                                                                                           8
```

GTTCTTCAGTCGATATATGGCTATTGGTTGTTTTTTGCAGAGCTCCTGACAGGCCAGC GTTCTTCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAGC CACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA 731 CACTGTGGCCTTGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA

671

536

969

셤 ઠે

929

셤

715

775 910 835

TACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGG

851

g

911 911 836 971

ò 셤 à a ò 8

716

ઠે

791 AATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTA TACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGG CTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACTGTTCCC AACTCCTGGAGAGCCTCCTACTTTGATTCTTTCAAGAGGCCCCAAATTAAAAGGAAAAGCAC

CTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCC

```
This invention relates to the CDNA and protein sequences of fifty six polynucleotides for diagnostics and therapeutics (DITHP). The human DITHP polynucleotides and polypeptides are useful for diagnosing, preventing or treating diseases associated with, as well as effects of exogenous compounds, on the expression of human molecules, such as cell compounds, on the expression of human molecules, such as cell compounds, primary thrombocytopenia), autoimmune-inflammatory diseases (e.g. anaemia, asthma, autoimmune thyroiditis, crohn's disease, diabetes arthritis, uveitis, acquired immunodeficiency disease; AIDS; allergies; neurological disorders (e.g. stroke, Alzhaimer's disease, dementia, arthritis, uveitis, acquired immunodeficiency disease; AIDS; allergies; neurological disorders (e.g. stroke, Alzhaimer's disease, dementia, mental retardation, Parkinson's disease, epilepsy), gastrointestinal (e.g. ulcer, cirrhosis), reproductive (e.g. infertility, endometriosis), reproductive (e.g. infertility, endometriosis), hyposylycaemia, hyperparathyroidism, hypercholesterolaemia, hyposylycaemia, hyperparathyroidism, hypercholesterolaemia, hyposylycaemia, hyperparathyroidism, paraaltic, protozoal). The DITHP sequences may be used to viral, fungal, paraaltic, protozoal). The DITHP sequences may be used to viral, fungal, paraaltic, protozoal). The DITHP sequences may be used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     occurring genomic sequences. They are also useful in designing probes useful in diagnostic assays. The polynucleotides are useful as molecular weight markers, or as antigen to elicit an immune response. The present
New human diagnostic and therapeutic (DITHP) polynucleotides and polypeptides, useful for diagnosing, preventing or treating diseases, e.g. cancer, AIDS, Parkinson's disease, or autoimmune/inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence represents a human diagnostics and therapeutics (DITHP) cDNA
                                                                                                                                                                     Claim 1; Page 267; 331pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence of the invention
                                                                                                      diseases
```

1030

AACTCCTGGAGAGCTCCTACTTTGATTCTTTCAAGAGGGCCCAAATTAAAAAGGAAC

GTAATGAAGGAAGAAACAGAAGACGCCAACAG 1062 GTAATGAAGGAAGAACAGAAGACGCCAACAG 927

1031

968

Gaps 5, Score 868.8; DB 10; Length 1678; Pred. No. 1.4e-223; 0; Mismatches 2; Indels 5; Sequence 1678 BP; 541 A; 308 C; 336 G; 493 T; 0 U; 0 Other; 91.9%; Best Local Similarity 99.2 Matches 925, Conservative Query Match

370 ATGGAGAAGTATGAAAAATTAGCTAAGACTGGAGAAGGCTCTTATGGGGTTGTATTCAAA 190 418 TGCAGA-AACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGA 119 recagaraacaaaacercregacaagagaragragererraaaaaarrreregaareregaaga 250 TGATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTA-TGTTGAAGCAATTAAAAC 178 TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTACTGTTGAAGCAATTAAAAC 310 179 ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTT 238 430 431 ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC 490 ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC 358 491 ATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAA 550 TCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATT 478 09 ATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAA 1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 191 120 61 311 239 371 299 359 셤 셤 g ò 셤 ઠે 셤 ઠે 유 ò g ò ò δ 8

Human; protein kinase; PTK; STK; cancer; cardiovascular disease; metabolic disorder; immune related disease; neurological disorder; neurodegenerative disorder; inflammatory disorder; infectious disease; reproductive disorder; gene therapy; ss. G, Sudarsanam S, Martinez Polynucleotide sequence encoding human protein kinase #25. Manning AAS06725 standard; cDNA; 1083 22-NOV-2000; 2000WO-US032085. 99US-0167482P. (first entry) Whyte D, Clary D; WPI; 2001-343950/36. (SUGE-) SUGEN INC P-PSDB; AAU03525. WO200138503-A2 12-SEP-2001 24-NOV-1999; Plowman GD, Flanagan P, 31-MAY-2001. RESULT 5 

Nucleic acids encoding human kinase polypeptides, useful for preventing diagnosing and/or treating e.g. cancer, immune, cardiovascular and neuronal-associated diseases, and microbial infections. Example 1; Fig 1; 433pp; English.

novel AASO6701-AASO6757 encode for novel human protein kinases #1-57. The protein kinases have been identified as members of the tyrosine or serine/threonine kinase (PTK and STK) families. The polynucleotides encoding protein kinases and the polypeptides may be used in the prevention, diagnosis and treatment of diseases associated with

511

TCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATT ATGTAGCTA-CGAGATGGTACCGAGCT-CCTGAACTTCTTGTGGGAGATACT-CAGTATG

419

셤 ઠે 셤

```
61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inappropriate kinase expression. For example, they may be used to treat cancers (especially cancers of haematopoietic origin), cardiovasular diseases (e.g. atheroscalerosis), metabolic disorders (e.g. diabetes), dispanded diseases (e.g. theumatoid arthritis), neurological disorders (e.g. schizophrenia), neurodegenerative disorders (e.g. schizophrenia), neurodegenerative disorders (e.g. disease), inflammatory disorders (e.g. asthma), infectious disease (e.g. HIV) and reproductive disorders (e.g. infertility).

Additionally, polynucleotides encoding protein kinases may be used for polypeptides may be used so missed as antigens in the production of antibodies against the protein kinases and in assays to identify modulators of protein kinase expression and activity
                                                                                                                                                                                                                                                                                                                                1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                       61 İGCAGAAACAAACCICIGGACAAGIAGIAGCIGIIAAAAAAITIIGIGGAAICIGAAGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 TTACCTGATCTGATTGATGCATTTGCAGTTCCAGGAGATGCCTACACCGATTATGTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    667 AGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAAAATCAGAATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTAATCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTC
                                                                                                                                                                                                                                                                                     54;
                                                                                                                                                                                                                                            Query Match
91.3%; Score 863; DB 4; Length 1083;
Best Local Similarity 94.5%; Pred. No. 4.3e-222;
Matches 927; Conservative 0; Mismatches 0; Indels 5:
                                                                                                                                                                                                            Sequence 1083 BP; 366 A; 199 C; 225 G; 293 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGATTTGTGACTTCGGGTTTGCACAAATTCTGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            727
     g
                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                  임
                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

120

9 60

Gaps

240 240 420

454

486 540 546 9 909 099 999 720

g ò g ò qq à 780 786

360 420

906 781 GAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTC 840 The present sequence is a cDNA encoding novel human protein (NHP) known as human kinases. The human kinases share structural similarity with human kinases, more particularly serine or threonine protein kinases. The diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of MHP in the body. The NHP uncleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of center cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. MHP oligonucleotides are used as probes. The labelled PNHP probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations 847 AGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAAAAGAAAAGGACGTAATGAAGGA /product= "Human kinase #5" /note= "The coding region does not include stop codon" New isolated human kinase polynuclectide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases. В; Human, kinase; gene therapy; bioreactor; mental disorder; biological disorder; ss. Zambrowicz Friedrich G, Location/Qualifiers AGAAACAGAAGACGCCAACAG 927 981 Claim 1; Page 31-32; 38pp; English. AAD03816 standard; cDNA; 1041 BP Nehls M, 961 AGAAACAGAAGACGCCAACAG 27-SEP-2000; 2000WO-US026621. 99US-0156511P. (LEXI-) LEXICON GENETICS INC. ø 1. .1041 /\*tag= a /partial Turner CA, Human kinase cDNA #5. WPI; 2001-266166/27. P-PSDB; AAE00494. WO200123579-A1 Homo sapiens 28-SEP-1999; 19-JUN-2001 907 901 787 Donoho G, Sands AT; AAD03816; RESULT 6 g ò g ò à g

```
120
                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                    as
                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804
                                                                                                                                                                                                             9
                                                                                                                                                                                                                                          9
within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                        CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAAAGGAAATTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTTGAACTTCATGAAGGGTGTCTCTAAAG
                                                                                                                                                                                                         1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                          TGCAGAAACAAAACCTCTGGACAAGTAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                        TGCAGAAACAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGATAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                       121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTAGCTACGAGATACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          reagregararaggerraraggrarrargrarracagactreragaeggeeageeage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCCAGAAGACATGGAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781 AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                745 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                    CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                             Gaps
                                                                                                                                                                            96;
                                                                                                                                              Length 1041;
                                                                                                             Sequence 1041 BP; 344 A; 190 C; 228 G; 279 T; 0 U; 0 Other;
                                                                                                                                                                          Indels
                                                                                                                                            Score 839; DB 4; I
Pred. No. 1.3e-215;
0; Mismatches 0;
                                                                                                                                            88.88;
                                                                                                                                                             90.88;
                                                                                                                                                           Best Local Similarity 90.8
Matches 945, Conservative
                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    651
8888888888
                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                         쉽
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
```

```
the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP muclectide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled polymorphisms and as primers in amplification assays for identifying within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP
 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence is a cDNA encoding novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product= "Human kinase #2"
/note= "The coding region does not include stop codon"
                                901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Β,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zambrowicz
                                                                                                                                                                                                                                                                                                                                                                                Human; kinase; gene therapy; bioreactor; mental disorder;
biological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Friedrich G,
                                                                                                                                                 1021 CAGGTACTTCCGCTCAAAAGT 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .1068
                                                                                                                                945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 28; 38pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Turner CA, Nehls M,
                                                                                                                                925 CAGGTACTTCCGCTCAAAGT
                                                                                                                                                                                                                                                 AAD03813 standard; cDNA; 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0156511P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (LEXI-) LEXICON GENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-SEP-2000; 2000WO-US026621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ๙
                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                               Human kinase cDNA #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-266166/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; AAE00491.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200123579-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-SEP-1999;
                                                                                                                                                                                                                                                                                                                19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Donoho G,
                                                                                                                                                                                                                                                                                AAD03813;
805
                                                                  865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sands AT;
                                                                                                                                                                                                                                  AAD03813
                                                                                                                                                                                                                RESULT
                                                                                       셤
                                                                                                                                                                                                                                                                  음
                                                               ò
                                                                                                                              8
                                                                                                                                                             a
```

œ

```
qq
       성, 음
                                                                                     셤
                                                               ઠ
       a
                                                                                                                                                            120
                                                                                                                                                                          61 recasanachanactrosachastrastrastranananarrrersanarrersansi 120
                                                                                                                                                                                                   180
                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                   9
                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               864
  in vivo that functions supply of NHP to the NHPs are used in gene
                                                                                                                           1 AIGGAAAAGTAIGAAAAAITAGCTAAQACTGGAGAAGGGTCTTAIGGGGTIGTAITCAAA
                                                                                                                                                      TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT
                                                                                                                                                                                                             GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                       CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAAGGCAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                               CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                        GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                                                                                                                                                                AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                  AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                         421 AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACGGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841 GAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGGGCTCCTACTTTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT
                                                                                              96;
                                                                         Score 823; DB 4; Length 1068; Pred. No. 2.6e-211;
                                                     0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT
                                                                                              0; Indels
products are used to genetically engineer cells bioreactors in the body delivering a continuous body. Nucleotide constructs encoding functional therapy for the modulation of NHP expression
                                                 Sequence 1068 BP; 344 A; 197 C; 240 G; 287 T;
                                                                                           0; Mismatches
                                                                       Query Match
Best Local Similarity 90.6%;
Matches 929; Conservative
                                                                                                                                                      61
                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                               121
                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 651
8888888
                                                                                                                              g
                                                                                                                                                     à
                                                                                                                                                                        엄
                                                                                                                                                                                             ò
                                                                                                                                                                                                              g
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                  임
                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
```

```
901 ATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCT 960
                                   TITCAAGAGGCCCAAAITAAAAAGAAAAGCACGTAATGAAGGAAGAAAAAAGAGACGCCAA 924
                                                                                                                                                                                                                                                                                                                                                                                  human; kinase; phosphatase; KPP; cardiovascular; antiarteriosclerotic; hypotensive; vasotropic; antiinflammatory; antianginal; anti-HIV; antialergic; antiasthmatic; immunosuppressive; antithyroid; dermatological; antidabetic; nephrotropic; antigut; gastrointestinal; neuroprotective; osteopathic; antiarthritic; uropathic; ophthalmological; antisheumatic; antiparkinsonian; nootropic; anticonvulsant; hepatotropic; antisheumatic; antibacterial; virucide; protozoacide; fungicide; antibacterial; virucide; protozoacide; fungicide; cardiovascular disease; immune system; neurological; growth; development; cell proliferation; viral; bacterial; fungal; parasitic; protozoan; helminthic infection; transgenic; gene therapy; ss; gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a novel isolated polypeptide which is a human kinase and phosphatase (KPP). The polypeptide of the invention demonstrates cardiovascular, antiatrefiosclerotic, hypotensive, vasotropic, antiinflammatory, antianginal, anti-HIV, antiallergic, antidathmatic, immunosuppressive, antihyroid, dermatological, antidatethetic, nephrotropic, antigout, gastrointestinal, neuroprotective, osteopathic, antiarthritic, uropathic, opthalmological, antirheumatic, antiparkinsonian, nootropic, anticonvulsant, hepatotropic, antipsoriatic, haemostatic, cytostatic, antilpaemic, antiparasitic, antihelmintic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tran UK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New human kinases and phosphatases, useful for diagnosing, treating or preventing atherosclerosis, hypertension, AIDS, allergy, multiple sclerosis, osteoarthritis, Alzheimer's disease, Crohn's disease, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Richardson TW, Marquis JP, Swarnakar A, Tang YT;
Emerling BM, Jin P, Wilson AD, Yue H, Gietzen KJ;
Yang YG, Lee SY, Khare R, Elliott VS, Hafalia AJA;
Ramkumar J, Gururajan R, Tribouley CM, Chien D,
                                                                                                                                                                                                                                                                                                                                                     Human kinase and phosphatase KPP-45 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 5; SEQ ID NO 104; 347pp; English.
                                                                                                                                                                                                                                           standard; cDNA; 1266 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-AUG-2002; 2002US-0406172P.
25-SEP-2002; 2002US-0413910P.
27-SEP-2002; 2002US-0414296P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-AUG-2003; 2003WO-US026635.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2002; 2002US-0414296P.
11-OCT-2002; 2002US-0417821P.
                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2004-226830/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (INCY-) INCYTE CORP
                                                                                                           CAGGT 929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yang YG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-226830/
P-PSDB; ADK71868.
                                                                                                                                         CAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2004018641-A2
                                                                                                                                                                                                                                                                                                                  20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baughn MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chawla NK,
Murage J;
                                     865
                                                                                                                                                                                                                                                                              ADK71927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Becha SD,
Chang H,
                                                                                                           925
                                                                                                                                                 1021
                                                                                                                                                                                                                                           ADK71927
                                                                                                                                                                                                        RESULT 8
                                                                                                                                                                                                                         ADK71927
```

Fri

```
732
                                                                                                  954
                                                                                                                                                                                                    912
                                                                     792
                                                                                                                                     852
                                                                                                                                                                                                                                                                                    RESULT 9
ADI40928
                                                                 ઠે
                                                                                          요
                                                                                                                                  ò
                                                                                                                                                               원
                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                551
                                                                                                                                                                                                                                                                                                                                                     TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                              114 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 173
                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTAATCCCCAAGACA 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             534 TCCTTGATTGGCTTAATAGTTGACCTTCTGAATTCTTTTTTTCTGCCAATTCAGAGATTTTC 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               594 TCCCTGGCTTGGATCCATTGCTGTTCCAGGAGATGCCTACACCCGATTATGTAGCTACGAG 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                654 Argeracceaecrecaeacrrerereseagaracreagraresrrererereragresarar 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTAATCCCAAGACA 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    731
antibacterial, virucide, protozoacide and fungicide activities. The kinase and phosphatase (KPP) polynuclectides, polypeptides, agonists and antagonists may be useful for diagnosing, treating or preventing disorders such as cardiovascular diseases, immune system disorders, neurological disorders, disorders affecting growth and development, cell proliferative disorders and viral, bacterial, fungal, parasitic, protozoan or helminthic infections. Furthermore, the molecules of the invention may be useful for creating transgenic animals to model human disease and during gene therapy. The current sequence is that of a human
                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGA
                                                                                                                                                                                                                                                                                     ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----TTCCAGGAGATGCCTACACGATTATGTAGCTACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels 109; Gaps
                                                                                                                                                                                                                     Length 1266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGA---------
                                                                                                                                                                                    Sequence 1266 BP; 414 A; 234 C; 254 G; 364 T; 0 U; 0 Other;
                                                                                                                                                                                                                Score 808; DB 12;
Pred. No. 3.1e-207;
); Mismatches 0;
                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                   85.5%;
89.5%;
                                                                                                                                                   KPP cDNA of the invention.
                                                                                                                                                                                                                                 Best Local Similarity 89.5
Matches 927; Conservative
                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                       174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  492
   88888888888888888
                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
```

```
1013
                                                                                                                                               911
                                                                                                                                                                                                                                                                                                                                                                                                                                          human; kinase and phosphatase; KPP; enzyme; cardiovascular; antiarteriosclerctic; hypotensive; vasotropic; antiinflammatory; antiangland; antianglammatory; antiangland; antiangland; antiangle; antianglammatory; antityroid; dermatological; antidiabetic; nephrotropic; antigout; gastrointestinal; neuroprotective; osteopathic; antiarthritic; uropathic; ophthalmological, antihemmatic; antipachisonian; notropic; anticonvulsant; hepatotropic; CNS; antipachishinsonian; notropic; ortostatic; antilipaemic; antipachisic; antihelminthic; antibacterial; virucide; protozoacide; fungicide; gene therapy; kinase modulator; phosphatase modulator; cardiovascular disease; immune system disorder; neurological disorder; prototoer; infection; gene; ss.
 791
                                                                  851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 preventing atherosclerosis, hypertension, AIDS, allergy, multiple sclerosis, osteoarthritis, Alzheimer's disease, Crohn's disease, cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or
                                                                                   GGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTC
                                  894 CATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAAACTTCATGAA
                                                                                                                                GGGGTGTCTGAAGATGAAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kable AE, Richardson TW, Becha SD;
', Lee SY, Griffin JA, Khare R;
'PR, Swarnakar A, Chawla NK, Tran UK;
is JP, Thornton MB, Porsythe IJ, Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New human kinases and phosphatases, useful for diagnosing, treating
                                                                                                                                                                                                                                                                                                                                                                                                              Human kinase and phosphatase KPP-41 encoding cDNA SEQ ID NO:94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= a
/product= "kinase and phosphatase KPP-41"
CATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A, Emerling BM, Kable AE,
Tang YT, Lal PG, Lee SY
Jin P, Hawkins PR, Swa
R, Ding L, Marquis JP, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                  CAGAAGACGCCAACAG 1089
                                                                                                                                                                                                                                                                                                              ADI40928 standard; cDNA; 1429
                                                                                                                                                                                             CAGAAGACGCCAACAG 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JUL-2002; 2002US-0397354P.
02-MG-2002; 2002US-0400509P.
02-MG-2002; 2002US-040402783P.
15-AUG-2002; 2002US-0404027P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUL-2003; 2003WO-US022650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,4.tag= ',prc'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-132950/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (INCY-) INCYTE CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; ADI40875.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2004009778-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hafalia AJA,
                                                                                                                                                                                                                                                                                                                                                                              22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JAN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baughn MR,
Elliott VS,
Gururajan R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gietzen KJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sclerosis,
or hepatit
                                                                                                                                                                                                                            1074
```

The present sequence encodes a human kinase and phosphatase (KPP)

protein. KPP sequences have cardiovascular, antiarteriosclerctic,

contiallergic, antianthmatic, antianginal, anti-HIV,

contiallergic, antianthmatic, immunosuppressive, antithyroid,

dermatological, antidiabetic, impurosuppressive, antithyroid,

continematic, antidiabetic, impurosuppressive, antithyroid,

continematic, antidiabetic, inpurotropic, anticonvulsant, hepatoriopic,

continematic, antiparkinsonian, noorropic, anticonvulsant, hepatoriopic,

continematic, antiparkinsonian, noorropic, antilipaemic, antiparasitic,

continematic, antibacterial, virucide, protozoacide and fungicide

continematics and be used in gene therapy, and as kinase modulators and

phosphatase modulators. KPP proteins, polymucleotides, agonists and

continematics can be used for diagnosing, treating or preventing disorders

continematics and be used for diagnosing, reating or preventing disorders

consective heart failure), immune system disorders (e.g. athrosoclerosis, phopertension, vasculitis, angina pectoris

consective heart failure), immune system disorders (e.g. AlDS,

allergies, asthma, autoimmune thyroiditis, contact dermatitis, contact

consective heart failure), immune system disorders (e.g. AlDS,

contactive heart failure, minutiple sclerosis, osteoarthritis,

conteoporosis, pancreatitis, Reiter's syndrome, theumatoid arthritis,

conteoporosis, pancreatitis, neurological disorders (e.g. Alzheimer's

conteoporosis, pancreatitis, neurological disorders (e.g. Alzheimer's

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, pancreatitis, neurological disorders (e.g.

conteoporosis, neurological disorders (e.g.

conteoporosis, one conteoporosis, one 5; SEQ ID NO 94; 330pp; English Claim

Sequence 1429 BP; 466 A; 286 C; 294 G; 383 T; 0 U; 0 Other;

120 249 180 240 309 300 9 369 360 429 420 489 1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT Gaps Score 704.4; DB 12; Length 1429; Pred. No. 2.7e-179; 0; Mismatches 1; Indels 199; 1; Indels 199; 421 AAGATTIGIGACTICGGGTTTGCACAATTCTG------74.5%; 82.2%; Jest Local Similailly .... Matches 924; Conservative Query Match 61 121 190 250 241 301 g ò g ò 요 ò g ò 셤 à g g à ò

550 GCTCATCTCGAACTTCTGGCCTCAAGTGATCCTTCCACCTCGGCCTCCCAAAGTGCTGGA 609 1088 TAACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTA 1147 463 789 583 847 643 823 907 703 967 763 883 610 TTACAAGTGTGAGCCACCGTGCCCAGCCAGATTTTTCAAACAATAACTACTGAGAGCTCA 670 CAAGATIGITITIAGIGGGAACACAATITICGAACAAAITCITGAGAACGCATTCCAGGAG 464 AIGCCTACACCGAITATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAG ATACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCC TGACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCA TGACAGGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCA GAACACTAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTTCC ATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATG 764 ITCAICCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGAT 1028 TICATCCTGTGGGCTCTGAACTTCATGAAGGGTGTCTGAAGATGAATCCAGATGACAGAT 824 TAACCTGTTCCCAACTCCTGGAGGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTA 884 AAAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG 927 AAI64248 standard; cDNA; 882 454 730 524 584 848 644 704 AAI64248; RESULT 10 AA164248 셤 à g ò qq ò g ò 셤 8 g ò Pp à 엄 8 염 ઠે 셤 g 

08-MAR-2002 (first entry)

Human kinase 14257 cDNA.

antidiabetic, neuroprotective, antiarthritic; dernatological; immunosuppressive, antinflammatory, antithyroid, antipsoriatic, ophthalmological; antiallergic, antiasthmatic; antiatheresclerotic; hypotensive, vasotropic; antiarthythmic; virucide; anorectic; metabolic; immunomodulator; analgesic; cellular proliferative disorder; cancer; caute lymphoblastic leukaemia; Hodgkin's disease; bone metabolism disorder; osteoporosis; immune system disorder; osteoporosis; immune system disorder; cancer; inflammatory; diabetes mellitus; osteoarthritis; asthma; cardiovascular disorder; hypertension; coronary artery disease; Protein kinase; enzyme; cytostatic; osteopathic; hepatotropic; endothelial cell disorder; psoriasis; ss

Homo sapiens

Location/Qualifiers /\*tag=

Key 5'UTR

```
Human; mouse; protein kinase; antiarthritic; antisclerotic; osteopathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acida encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease,
                                                                                                                                                                                                                                                                                                    AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence encodes a novel protein kinase. The nucleic acids and the protein kinases they encode may be used in the treatment and diagnosis of diseases associated with inappropriate kinase expression such as immune related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers. The nucleic acids and
                                                                                                             GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                            AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                               AACTGTATTCACAGAGATGTAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                        AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                 GTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rcagrocararagagorarragarrararrararraragagorrocragagocagocadora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunosuppressive; cardiant; renal; antinflammatory; antiasthmatic; dermatological; antidiabetic; antinfertility; gene therapy; vaccine; immune disorder; cardiovascular disease; neurodegenerative disease; cancer; autoimmune disorder; stroke; inflammatory bowel disease; inflammatory pelvic disease; multiple sclerosis; psoriasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sudersanam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neurodegenerative diseases and/or cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel protein kinase cDNA, SEQ ID NO: 49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 4; Fig 2; 310pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Whyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAY-2000; 2000WO-US014842.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF44669 standard; cDNA; 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0136503P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plowman GD, Martinez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-032161/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SUGE-) SUGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAB65642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200073469-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-DEC-2000
                                                                                                                                                                                                                                                                                                         549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF44669;
                          369
                                                                      301
                                                                                                                  429
                                                                                                                                                                361
                                                                                                                                                                                                               489
                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                      609
                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                699
                                                                                                                                                                                                                                                             421
                                                                                                      ద
                                                                                                                                                    ò
                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                         ठे
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated 14257 polypeptide and nucleic acid encoding it. The 14257 protein is a protein kinase that acts as a modulating agent in regulating a variety of cellular processes, including cell proliferation, differentiation, growth and division. The activity of the protein of the invention may be described as; cytostatic; osteopathic; hepatotropic, antidiabetic; neuroprotective, antiarthritic; antiparthritic; antiparthritic; antipsoriatic; ophthalmological; antiallergic; antiarthritic; antipsoriatic; ophthalmological; antiallergic; antiarthritic; antipsoriatic; ophthalmological; antiallergic; antiarthritic; antiparthritic; antiparthritic; antiparthritic; antiparthritic; antiparthritic; antiatherosclerotic; hypotensive; vasotropic; antiarthritic; cancetic; metabolic; immunomodulator and analgesic. The protein of the invention may act as a novel diagnostic target or therapeutic agent controlling certain disorders, for example kinase-associated or other controlling certain disorders. These may include cellular proliferative disorders such as cancers e.g. acute lymphoblastic leukemia or Hodgkin's disease. Other disorders include bone metabolism disorders such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    o;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               osteoporosis, disorders of the immune system, e.g. inflammatory, diabetes mellitus, osteoarthritis and asthma. Proteins of the invention and albertes mellitus, osteoarthritis and asthma. Proteins of the invention as lupertension and coronary artery disease, and some endothelial cell disorders, including psoriasis. The current sequence represents a human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCCTATTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New 14257 polypeptides (protein kinases), useful as diagnostic targets and therapeutic agents for controlling cellular proliferative and/or differentiative disorder, bone disorders, immune disorders and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGGAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 645.4; DB 6; Length 882;
Pred. No. 1.8e-163;
0; Mismatches 6; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 882 BP; 288 A; 150 C; 198 G; 245 T; 0 U; 1 Other;
                                              "Protein kinase 14275"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 2; Fig 1A; 98pp; English
                                                                                                                                                                                                                                     13-APR-2001; 2001WO-US012188
                                                                                                                                                                                                                                                                                                                                 (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68.3%;
99.1%;
                                                                                                                                                                                                                                                                                   13-APR-2000; 2000US-0196910P
129. .815
/*tag= b
/product= '816. .882
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cardiovascular disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 649; Conservative
                                                                                                                                                                                                                                                                                                                                                                                Kapeller-Libermann R;
                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-034355/04.
P-PSDB; AAG78547.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kinase 14257 cDNA
                                                                                                                                        WO200179488-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                    3'UTR
  900
```

ď

ઠે

g

કે

ઠે

용

ठ 용 ઠે

```
complementary sequences may also be used as DNA probes in diagnostic assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Anti-kinase antibodies and kinase expression and activity. Anti-kinase antibodies expression and activity. Diseases related to kinase expression and activity. Diseases related to kinase expression and activity include rheumatoid arthritis, atherosclerosis, autoimment immune disorders, camplications of organ transplantation, myocardial infarction, stress related disorders, cardiomyopathies, strokes, renal failure, oxidative-inflammatory pelvic disease, multiple sclerosis, ashma, osteoarthritis, psoriasis, rhinitis, autoimmunity, diabetes, cancers and reproductive
                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACCIGITCCCAACTCCTGGAGGCTCCTTTGATTCTTTTCAAGGGCCCAAATTAA 600
                                                                                                                                                                                                                                                                  285 AAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                                                                                                                                                                                      TTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAC
                                                                                                                                                                                                                                                                                                                                                                                 TAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCTACACGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACACTAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACACTAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   825 AACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAA
                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                    Length 911;
                                                                                                                                                                             Sequence 911 BP; 293 A; 182 C; 178 G; 258 T; 0 U; 0 Other;
                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    885 AAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG
                                                                                                                                                                                                              Score 643; DB 4; Le
Pred. No. 7.9e-163;
                                                                                                                                                                                                                     100.0%; Pred. No.
                                                                                                                                                                                                                 68.08;
                                                                                                                                                                                                                          Local Similarity 100.
                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                н
                                                                                                                                                                                                                                                                                                                          345
                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                      Matches
88888888888888888888888888888888888
                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
```

```
285 AAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                             345 TITCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATCTAATAAC
                                                                                                                                                     TTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAC
                                                                                                                                                                                    TAAGCAAGGAATAATCAAGATTTGTGACTTTCGGGTTTTGCACAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                      585 GACAGGCCACTGTGGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAG
                                                                                                                                                                                                                                                                                                                                                                     TGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                               TACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCT
                                                                                                                                                                                                                                                                                                                        TACTCAGTATGGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTTGCAGAGCTCCT
                Ouery Match 68.0%; Score 643; DB 12; Length 911; Best Local Similarity 100.0%; Pred. No. 7.9e-163; Matches 643; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                    405
                                                                                                                                                        61
                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                               525
                                                                      ઠે
                                                                                                엄
                                                                                                                           ò
                                                                                                                                                      g
                                                                                                                                                                                                          g
                                                                                                                                                                                  à
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                      Š
420
                         764
                                                     480
                                                                                                                                       884
                                                                                 824
                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                  Human MARK3-associated cDNA #37
                                                                                                                                                                                                                                                                               ADI29367 standard; cDNA; 911
                                                                                                                                                                                                                                                                                                                                         (first entry)
```

ö

Gaps ; 404 120 464

9

240 584 300 644

g

22-APR-2004

ADI29367;

ADI29367
ID ADI;
XX
AC ADI;
XX
DT 22XX
DE Hum

RESULT 12

```
The invention relates to a compound comprising a sequence comprising 8-80 (MAP/microtubule affinity-regularing kinase 3), that specifically hybridises with the nucleic acid encoding MARK3 and inhibits expression of MARK3, i.e. is an antisense oligonucleotide (AO). Also included are a composition comprising the compound and a carrier or diluent, inhibiting suspected of having a disease or condition associated with MARK3 and suspected of having a disease or condition associated with MARK3 and useful for preparing a composition for treating hyperproliferative disorder, particularly cancer and neurodegenerative diseases e.g. Alzheimer's disease. The present sequence is a MARK3 associated onn manifely manifely decided in the figures but not mentioned anywhere else in the
                                                                                                                                                                                                                                                                                                                                                                                               New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating expression of MARK3 or for treating cancer or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 911 BP; 293 A; 182 C; 178 G; 258 T; 0 U; 0 Other;
                                               cancer;
              Human, ss; antisense gene therapy; MARK3;
MAP/microtubule affinity-regulating kinase 3; cs
Alzheimer's disease; neurodegenerative disorde;
                                                                      hyperproliferative disorder; cytostatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure, Fig 2; 233pp; English.
                                                                                                                                                                                                                                                                                                                    Dobie KW;
                                                                                                                                                                                                         17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                              2002US-00174319.
                                                                                                                                                                                                                                                                               (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                            Ward DT, Freier SM,
                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-052188/05.
                                                                                                                                      US2003232771-A1.
                                                                                                                                                                                                                                                                                                                                                                    P-PSDB; ADI29249
                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                              17-JUN-2002;
                                                                                                                                                                       18-DEC-2003
```

ö 344

404

9

464

ä

Gaps

254 117 314

57

434

494 357 554 417 614 477 674 734 597 794 657 854

ઢ

```
GAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAA 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGCACAATTGTATTCATCG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238 GGATGTAAAACCTGAAAACATCCTAATAACCAAGCAAGGGATGATAAAGATTTGTGACTT 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTTCAGTCTTTTCAAGAGGATCAAATGAAAAGAAAAGCCCGCAGTGAGGGGAGAAGCCG 777
                myocardial infarction,
failure, oxidative-
ulsorders, complications of organ transplantation, myocardial infarction immune disorders, cardiomyopathies, strokes, renal failure, oxidativestress related disorders, chronic inflammatory bowel disease, chronic inflammatory powel disease, chronic phoriamatory pelvic disease, multiple sclerosis, asthma, osteoarthritis, psoriasis, rhinitis, autoimmunity, diabetes, cancers and reproductive disorders
                                                                                                                                                                                                                                                                                                                                                                                             118 CACACTGTTAAACGAGCTGGAGAAAACCCAAACGGAGTTTCTGATGGAGTGATTAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCCGTCGGCTGTTTTTGCAGAGCTCCTGACGGGTCAGCCCACTCTGGCCGGGAAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    478 CGACGTGGACCAGCTTTACCTGATCATCAGGACGTTGGGGAAGCTGATTCCAAGACACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              658 Argecrica Agaraca de Arganda de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de Caraca de 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTTGAATACTGTGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACACTITITAAATGAGCTGGAAAGAAACCCCAAATGGAGTTGCTGATGGAGTGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              298 TGGATTTGCACGAATTCTAATTCCAGGAGACGCCTACACAGACTATGTTGCCACAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>eracceaecceceaacrreregeaeacacaceaearacerrecrereraaacerere</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      615 AGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTAATCCCAAGACATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   675 ATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGACTCTTGAAGAAATTCTCAAATGTTCAGCCTGTGGCCTTTAAGTTTCATGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 538 grcrarcriraggagraaccagririrccgcggcarcagcaraccrgaaccagaggacar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGG
                                                                                                                                                                                                                                                                                                      3;
                                                                                                                                                                                                                                                  Score 559.2; DB 4; Length 2615; Pred. No. 4.6e-140; 0; Mismatches 143; Indels 3;
                                                                                                                                                                                                    Sequence 2615 BP; 742 A; 580 C; 585 G; 708 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGACGCCAACAGGTACTTCCGCT 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGCGCCAGCAGAATCAACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADI29368 standard; cDNA; 2615
                                                                                                                                                                                                                                                        59.2%;
81.8%;
                                                                                                                                                                                                                                                                                Local Similarity 81.8
                                                                                                                                                                                                                                                                                                                                                            135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              915
                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADI29368
ID ADI2
                   8888888888
                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence encodes a novel protein kinase. The nucleic acids and the protein kinases they encode may be used in the treatment and diagnosis of diseases associated with inappropriate kinase expression such as immune-related diseases and disorders, cardicovascular disease, neurodegenerative diseases and/or cancers. The nucleic acids and neurodegeneraty educaces may also be used as DNA probes in diagnostic assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Anti-kinase antibodies expression and activity biseases related to kown regulate kinase expression and activity. Diseases related to kinase expression and activity biseases related to kinase expression and activity include rheumatoid arthritis, atherosclerosis, autoimmune
                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                764
                                                                                                                                                                                                                                                     824
                                                                                                                                                                                                                                                                                                                                                            AACCTGTTCCCAACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAA 884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; mouse; protein Kinase; antiarthritic; antisclerotic; osteopathic; immunosuppressive; cardiant; renal; antiinflammatory; antiasthmatic; dermatological; antidiabetic; antiinfertility; gene therapy; vaccine; immune disorder; cardiovascular disease; neurodegenerative disease; cancer; autoimmune disorder; stroke; inflammatory bowel disease; inflammatory pelvic disease; multiple sclerosis; psoriasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease
                                                                      AACACTAGGAAAATTAATCCCAAGACATCAATCTATAAAAGTAACGGGTTTTTCCA
                                                                                                                                                                                   AACACTAGGAAAATTAATCCCAAGACATCAATCTTTTAAAAGTAACGGGTTTTTCCA
                                                                                                                                                TGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGT
                                                                                                                                                                                                                                                     TCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATT
                                                                                                                                                                                                                                                                                      TCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGAAAAGCACGTAATGAAGGAAGAACAGAAGACGCCCAACAG 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGAAAAGCACGTAATGAAGGAAGAACAGAAGACGCCAACAG 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sudersanam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel protein kinase cDNA, SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neurodegenerative diseases and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 2; 310pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Whyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF44670 standard; cDNA; 2615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAY-2000, 2000WO-US014842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0136503P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Martinez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-032161/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB; AAB65643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200073469-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plowman GD,
                                           645
                                                                                            361
                                                                                                                                                705
                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                  765
                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF44670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                     ઠે
                                                                                                                                                                                   a
                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

417 614 674 537 734 597 794 657 854 717 914

```
238 GGATGTAAAACCTGAAAAGCTCCTAATAACCAAGGGATGATAAAGATTTGTGACTT 297
                                                                                                                                                                                                                                418 GGCCGTCGGCTGTGTTTTTGCAGAGCTCCTGACGGTCAGCCACTCTGGCCGGGAAAATC 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718 chingagichinicaagagancaaangaaagaaaaagcccccagigaggaggagagagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MDDT; human, disease detection and treatment molecule polypeptide; anti-inflammatory; immunosuppressive; osteopathic; cytostatic; anti-HIV; haemostatic; nephrotropic; antianaemic; antipsoriatic; hepatotropic; gene therapy; protein replacement therapy; cell proliferative disorder; cancer; adenocarcinoma; leukaemia; lymphoma; melanoma; myeloma; sarcoma; anaemia; Crohn's disease; acquired immunodeficiency syndrome; AIDS; Goodpasture's syndrome; inflammation; osteoporosis; thrombocytopaemia;
                                                                                            CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG
                                                                                                                                     GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTCGATATATG
                                                                                                                                                                   358 draccdadeccecedaderretedededadadedededederederedadadedede
                                                                                                                                                                                                    GGCTATTGGTTTTTTGCAGAGCTCCTGACAGGCCAGCCACTGTGGCCTGGAAAATC
                                                                                                                                                                                                                                                                   615 AGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTAATCCCAAGACATCA
                                                                                                                                                                                                                                                                                                   cdacdriddacchirraccridarcarchicagacarraddaaagcrigarriccaagacaca
                                                                                                                                                                                                                                                                                                                                  675 ATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACAT
                                                                                                                                                                                                                                                                                                                                                                538 GTCTATCTTTAGGAGTAACCAGTTTTTCCGCGGCATCAGCATACCTGAACCAGAGGACAT
                                                                                                                                                                                                                                                                                                                                                                                                   GGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                            795 GIGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGGCTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  658 Aráccrigaadatordantandandacrigactraracchachachachandand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGACGCCAACAGGTACTTCCGCT 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               778 Adgccccaccacrccr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   psoriasis; hepatitis; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABX34679 standard; cDNA; 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0279619P.
2001US-0280067P.
2001US-0280068P.
2001US-0291280P.
2001US-0291849P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-MAR-2002; 2002WO-US009944.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human mddt cDNA SEQ ID 240.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-FEB-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200279449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-MAY-2001;
17-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-OCT-2002
                                                                      435
                                                                                                                                     495
                                                                                                                                                                                                      555
                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                     735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   915
                                                                  à
                                                                                                g
                                                                                                                                 ò
                                                                                                                                                               g
                                                                                                                                                                                                                              임
                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a compound comprising a sequence comprising 8-80 base pairs (bp) targeted to a nucleic acid encoding MARK3 (MAP/Microtubule affinity-regulating kinase 3), that specifically (MAP/Microtubule affinity-regulating kinase 3), that specifically of MARK3, i.e. is an ancisense encoding MARK3 and inhibits expression of MARK3, i.e. is an ancisense eligonucleotide (AO). Also included are a the expression of MARK3 in cells or tissues, treating an animal having or sereening of mark3 and sereening a composition of the expression of MARK3 and a carrier or diluction or sereening a composition for treating Myperprofiferative last of the expression of mark and markalating for an antisense compound. The antisense oligonucleotide is disorder, particularly cancer and neurodegenerative diseases e.g. Alzheimer, a disease. The present sequence is a MARK3 associated cDNA included in the figures but not mentioned anywhere else in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTT 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating expression of MARK3 or for treating cancer or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135 GAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTTGAATACTGTGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCATCGAGGTGTTCAGAAGAAGAAGAAGATGCATCTAGTTTTTTGAGTACTGTGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178 refrectariedcaaaccerteaaccertaacriterereacacacaarietaricaree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAAATAGCCCTGCGGGAAATCCGTATGCTGAAG---TTGAAACACCCCAAACCTCGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              255 TACACTTTTAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              315 CGIATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 12; Length 2615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2615 BP; 742 A; 580 C; 585 G; 708 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                     Mouse; ss; antisense gene therapy; MARK3; MAP/microtubule affinity-regulating kinase 3; c. Azheimer's disease; neurodegenerative disorde; hyperproliferative disorder; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 559.2; DB 12
Pred. No. 4.6e-140;
0; Mismatches 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure, Fig 2; 233pp; English.
                                                                                  Mouse MARK3-associated cDNA #12.
                                                                                                                                                                                                                                                                                                                                                                                                         Dobie KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
                                                                                                                                                                                                                                                                                                 17-JUN-2002; 2002US-00174319
                                                                                                                                                                                                                                                                                                                                  17-JUN-2002; 2002US-00174319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 81.8%;
Matches 658; Conservative 0
                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                  (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                  Ward DT, Freier SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                 2004-052188/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB; ADI29250
                                                                                                                                                                                                                                    US2003232771-A1.
                                                                                                                                                                                                  Mus musculus
                                                  22-APR-2004
                                                                                                                                                                                                                                                                   18-DEC-2003.
                   ADI29368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
```

g ઠે a ò В ò В

```
PR 19-UNW-2010; 2001US-0299428P.

PR 20-UNW-2001; 2001US-0299428P.

PR 20-UNW-2001; 2001US-0300001E.

XX

(INCY-) INCYTE GENOMICS INC.

Process of Hillman Ju, Yu JY, Tusano D, Yap BE, Amshey SR; Daugherty SC, Dam TC, Liwir FF, Nguyen DA, Rieefeld W, Gerstin EH; Plores V, Marwaha R, Lo A, Lan RY, Urashka ME; Marris B; Plores V, Marwaha R, Lo A, Lan RY, Urashka ME;

Process V, Marwaha R, Lo A, Lan RY, Urashka ME;

R P-8DB; ABU11689.

XX

New purified disease detection and treatment molecule proteins and propucleotides, useful for diagnosing, treating or preventing cancers or hepatitis.

XX

New purified disease detection and treatment molecule proteins and propucleotides, useful for diagnosing, treating or preventing cancers or hepatitis.

XX

New purified disease detection and treatment molecule proteins and propucleotides, useful for diagnosing, treating or preventing cancers or hepatitis.

XX

Claim 1; SEQ ID NO 240; 339pp + Sequence Listing; English.

XX

This invention describes a novel disease detection and treatment molecule or propyeptide (MDDT) which has anti-inflammatory, immunosuperssive, osteopathic, cytostatic, anti-inflammatory, immunosuperssive, osteopathic, cytostatic, anti-inflammatory, immunosuperssive, osteopathic, antipsoriatic and hepatotropic activity. The polymocleotides of particularly useful for diagnosing, treating or preventing cell particularly useful for diagnosing, treating or preventing cell confidence, inflammation, coancers including vellored are expected or particularly useful for diagnosing, treating or preventing cell confidence, inflammation, coancers including vellored in the disclosure of the printed correction, but was obtained by the MDT polypeptides are prevented in the sequence data for this patent did not form part of the printed correction, but was obtained by engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage engage en
```

```
GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 1063
                                                                               ö
                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                           884 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGAAGGAATAATC 420
                                                                                                                                                  GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                             764 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 823
                                                                                                                                                                                                                                                                                                                         824 GATCCTGTTGATAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 883
                                                                                                                      9
                                                                                                                      1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                    TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                  CCAAATCTTGTGAACCTCATCGAGGTGTTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                             .
0
                                   Query Match 57.5%; Score 543.2; DB 8; Length 1281; Best Local Similarity 99.5%; Pred. No. 7.1e-136; Matches 545; Conservative 0; Mismatches 3; Indels 0;
Sequence 1281 BP; 428 A; 191 C; 317 G; 345 T; 0 U; 0 Other;
                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1004
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

ò	421 AA	421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480	480
q	1124 AA		1183
δ	481 GT	481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540	540
q	1184 GC	1184 GCAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCGGTATGGTTCT 1243	1243
ò	541 TC	541 TCAGTCGA 548	
q	1244 TC	1244 TCAGTCAA 1251	

21, 2005, 21:13:06

Search completed: April Job time: 522.228 secs

THIS PAGE BLANK (USPTO)

Sequence:

Run on:

Searched:

Database

```
AX107718 Sequence
BC081896 Rattus no
AX399975 Sequence
XK6358 H.sapiens m
CC492706 Sequence
AX12442 Ciona int
CQ714922 Sequence
AR221995 Sequence
AR21994 Sequence
AR21994 Sequence
AR21994 Sequence
AR38688 Sequence
AR38688 Sequence
AR38688 Sequence
AR021994 Sequence
AR021994 Sequence
AR021994 Sequence
AR021994 Sequence
AR021994 Sequence
AR021996 Mus muscu
AR029066 Mus muscu
AR029066 Mus muscu
AR029066 Mus muscu
AR022066 Mus muscu
AR022066 Mus muscu
AR022066 Mus muscu
AR022066 Mus muscu
AR022066 Mus muscu
AR022066 Mus muscu
AR022066 Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 945)
Donoho, G., Turner, C.A. Jr., Nehls, M.C., Friedrich, G., Zambrowicz, B. and Sands, A.T.
Human kinase proteins and polynucleotides encoding the same Patent: US 6716616-A 11 06-APR-2004;
Location/Qualifiers
1. 945
/organism="unknown"
                                                                                                                                                                                                                                                                                                                       PAT 15-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX107712 Sequence
AR492168 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 945;
                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 945; DB 6; Length 94 Best Local Similarity 100.0%; Pred. No. 1.7e-205; Matches 945; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                      AR492170 945 bp
Sequence 11 from patent US 6716616.
AR492170.1 GI:47260680
                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
                                               AX399975

RSTHPKE

CQ492706

AK112442

CQ14922

AR211995

AR438689

AR438689

AR438688

AR221994

AR31846

CR407462

BC083590
                                                                                                                                                                                            AB029065
AB029065
BC074132
BX932070
AF130372
AX107712
AR492168
AX107718
BC079506
BC081896
                                                                                                                                                                                    AB029067
                                                                                                                                                                           CQ588387
  Unclassified
  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                    287
283.8
280.6
275.8
272.6
272.6
272.6
272.6
272.6
272.6
272.6
272.6
272.6
  4554.4
4554.4
4554.4
4551.4
4511.4
4115.4
4113.8
360.2
360.8
                                                                                                287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                    RESULT 1
AR492170
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                  April 21, 2005, 20:25:49 ; Search time 4109.75 Seconds (without alignments) 11141.838 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                            1 atggaaaagtatgaaaaatt.......aggtacttccgctcaaaagt 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX107722

AX492167

AX7467716

AX59820

AX69820

AX166534

AX107720

AX107720

AX107714

AX286067

AX286067

AX286067

AX286067

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404

AX056404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR492170
                                                                                                                                                                                              9416466
           GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                           4708233 segs, 24227607955 residues
                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX107716
AX746179
AX698820
AX166534
AR492169
AX107720
AX107720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX286069
AX286067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR492165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX056404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR492171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX107724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX803417
                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                     US-10-766-691-11
945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match Length DB
                                                                                                                                                                                                                                                                                        90 ba: *
90 htg: *
90 on: *
90 on: *
90 ov: *
90 ov: *
90 ov: *
90 ov: *
90 ov: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1790
1678
1083
1041
1041
1068
1068
                                                                                                                                               IDENTITY NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0
100.0
98.3
98.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7:
8:
9:
110:
112:
13:
                                                                                                        Title:
Perfect score:
                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             945
945
929
929
929
868.8
863
863
863
863
864
6647
6647
6647
507
507
454.4
```

ö

Result No.

~

```
Local
        Best Loca
Matches
                                            Dp
                                                             à
                                                                           qq
                                                                                            à
                                                                                                        g
                                                                                                                           Š
                                                                                                                                       g
                                                                                                                                                      ò
                                                                                                                                                                      g
                                                                                                                                                                                                     g
                                                                                                                                                                                        Š
                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                   쉽
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                 જે
                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                            360
360
                                                             420
                                                                            420
                                                                                           480
                                                                                                           480
                                                                                                                          540
                                                                                                                                         540
                                                                                                                                                         900
                                                                                                                                                                                    TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA 660
                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                            720
                                                                                                                                                                                                                            661 ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT 720
                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                         PAT 30-APR-2001
                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                CTGGAGAGCTCCTACTTTGATTCTTTCAAGAGGCCCCAAATTAAAAGAAAAGCACGTAAT 900
                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                         GGAGTGATCAAAAGCGTATTATGGCAAACACTTTCAAGCTCTTAATTTTCTGTCATATACAT
                                     GAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                       AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGATTAT
                                                                                                GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                  ATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                 GAGCCAGAAGACATGGAAAACTTTTGAGGAAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG
                                                                                                                                                                                                                                                                                 AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
                                                                                                                                                                                                                                                                                           Donoho, G., Turner, C.A., Nehls, M., Friedrich, G., Zambrowicz, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                                                                                                                        GAAGGAAGAAACAGAAGACGCCAACAGGTACTTCCGCTCAAAAGT 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sands, J.T.
Human kinase proteins and polymucleotides encoding
Patent: WO 0123579-A 11 05-APR-2001;
Lexicon Genetics Incorporated (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .945
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                     AX107722
Sequence 11 from Patent WO0123579.
                                                                                                                                                                                                                                                                                                                                                                                                                            AX107722.1 GI:13923202
                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                      421
                                                                                                                                                     541
          241
                         301
                                        301
                                                        361
                                                                       361
                                                                                       421
                                                                                                                      481
                                                                                                                                    481
                                                                                                                                                                                     601
                                                                                                                                                                                                   601
                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
AX107722
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
CETWOEDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                        ò
                                  원
장
                                                                 8 % a
                                                                                                                 8 &
                                                                                                                                                               q
                                                                                                                                              ò
                                                                                                                                                                                               g
                                                                                                                                                                                   ò
                                                                                                                                                                                                                ò
                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                            8 6
                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                           원 장
                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                              8 8
```

Length 945;

9

Score 945; DB

100.08;

Match

Query

```
ö
                                                                   120
                                                                                    120
                                                                                                     180
                                                                                                                                                                      180
                                                                                                                                        240
                                                                                                                                                           240
                                 9
                                               9
                                                                                                                                                                                                              360
                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 15-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                      TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                       1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                            CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                              GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT
                                                                                                                                                                                                                    421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGTTAT
                                                                                                                                                                                                                                                                                           GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                         TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAAACACTAGGAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                     GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCATCCTGTGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           661 ATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781 AACTICATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAGGAAGAACAGAAGACGCCAACAGGTACTTCCGCTCAAAAGT 945
             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
llarity 100.0%; Pred. No. 1.7e-205;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR492167 972 bp
Sequence 5 from patent US 6716616.
AR492167
al Similarity
945; Conserv
                                                               61
                                                                                61
                                                                                                                  121
                                                                                                                                     181
                                                                                                 121
                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
AR492167
LOCUS
DEFINITION
ACCESSION
```

	Homo sapient Eukaryota; Mammalia; E: Mammalia; E: S Donoho,G., 1 Sands,A.T. Human kinase AL Patent: WO ( Lexicon Gene Los Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc	Query Match         98.3%;         Score 929;         DB 6;         Length 972;           Best Local Similarity 100.0%;         Pred. No. 7.6e-202;         Atches 929;         Occidental Conservative 0;         Mismatches 0;         Indels 0;         Gaps 0;           Qy         1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	QY         61 TGCAGAAACAAAACCTCTGGACAAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120           Db	Qy         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAAAAAGGAAAATGCATTTAGTTTTT 240           Db         181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT 240           Qy         241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	Qy         301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360           Db         301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360           Qy         361 AACTGTATTACAGAGATATAAAAACCTGAAAAATTTCTAATAACTAAGCAAGGAATAATC 420           Db         361 AACTGTATTCACAGAGATATAAAAACTGAAAAACTAAAACTAAGCAAGGAATAATC 420	421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT
riedrich, G., Zambrowicz, encoding the same	Arches 929; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Oratches 929; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Oratches 1   ArggaAaAgTarGaAaAaTaGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATCAAA 60	Qy         241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	Qy         361 AACTGTATTCACAGAGATATAAAACCTGAAATATTCTAATAACTAAGGAATAATC 420           Db	Qy         481 GTAGCTACGAGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540           IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Oy         601         TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTA 660           Db	721 GAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTG

Oy 121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTAI	479 301 539 361	Db   599 AACTGITATTCACAGAGATATAAAACCTGAAAATATTCTAAT   Qy   421 AAGATTGGACTTGGGGTTTGCACAAATTCTGATTCCAGG   Db   659 AAGATTTGGACTTGGACAATTCTGATTCCAGG   Qy   481 GTAGCTACGAGATGGTACCAGGTTCCTGGGTTGGGGTTGGGGTTGGGGTTGGGGTTGGGGTTGGGG	QY         541 TCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTC           Db         779 TCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTC           QY         601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATC           Db         839 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATC	Qy         661 ATCCCAAGACATCAATCATTTAAAAGTAACGGGTTTTTC           Db         899 ATCCCAAGACATCAATCAATCATTAAAAGTAACGGGTTTTTC           Qy         721 GAGCCAGAAAAAAAAAAAAAAATTCTCAGAI           Db         959 GAGCCAGAAAAAAAAAAAAAAAATTCTCAGAI	Qy         781         AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGA           Db         1019         AACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGACA	Oy 901 GAAGGAAGAACAGAAGACGCCAACAG 927 	AK698820 AK69820 AK6982
	661 661 721 721			-	AUTHORS Yue, H., Khan, F.A., Gururajan, R., Hafalia, A.J., Chawla, N.K., Arrizu, C.S., Ramkumar, J., Gandhi, A.R., Policky, J.L., Baughn, M.R., Tribouley, C.M., Bandman, O., Nguyen, D.B., Lu, Y., Burford, N., Lal, P., Ding, L., Yao, M.G., Bllott, V.S., Recipon, S.A., Kearney, L., Lu, D.A., Greenwald, S.R., Tang, Y.T., Xu, Y., Walsh, R.T., Gietzen, K.J., Lu, D.A., TITLE Human kinases	FEATURES Incyte Genomics, Inc. (US); Thornton, Michael (US) Location/Qualifiers 1. 1790 / Organism="Homo sapiens" / mol_type="genomic DNA" / db xref="taxon:9606" / note="Incyte ID No: 1698381CB1"	Query Match         98.1%; Score 927; DB 6; Length 1790;           Best Local Similarity 100.0%; Pred. No. 2e-201;         2e-201;           Matches 927; Conservative 0; Mismatches 0; Indels 0; Gaps 0;           Oy         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60

ATGTTGAAGCAATTAAAACAT 180 AGGAAATGCATTTAGTTTTT 240 AACCCAAATGGAGTTGCTGAT 300 CTTAATTTCTGTCATATACAT 360 ATGTTCATCCTGTGGCTCTG 780 GATTAACCTGTTCCCAACTC 840 ATAACTAAGCAAGGAATAATC 420 |||||||||||||||||||||||||| ATAACTAAGCAAGGAATAATC 658 3GAGATGCCTACACCGATTAT 480 3GAGATACTCAGTATGGTTCT 540 PAT 02-APR-2003 TCCTGACAGGCCAGCCACTG 600 TCAGAACACTAGGAAAATTA 660 |||||||||||||||||||| |TCAGAACACTAGGAAAATTA 898 TCCAIGGCAICAGIAIACCI 720 |||||||||||||||||| |TCCAIGGCAICAGIAIACCI 958 ctebrata; Buteleostomi; Jominidae; Homo. bur, G.E., Hillman, J.L.,
Flores, V., Daffo, A.,
J.E., Peralta, C.H., linear

us-10-766-691-11.rge

```
971 AACTCCTGGAGAGCTCCTACTTTGATTCTTTTCAAGAGGCCCCAAATTAAAAGAAAAGCAC 1030
                                                                                                                          PAT 22-JUN-2001
                                                                                                                                                                                                                                                                 Plowman,G.D., Whyte,D., Manning,G.S., Sudarsanam,S.S., Martinez,R., Flanagan,P. and Clary,D.S.
Novel human protein kinases and protein kinase-like enzymes Patent: WO 0138503-A 25 31-MAY-2001;
Sugeh, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGAAACAAAACCCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGATTTGTGACTTCGGGTTTGCACAATTCTGAGTAATTCACATGTTGGGAGAATTGAC 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTACCTGATCTGATTGATGCATTTGCAGTTCCAGGAGATGCCTACACCGATTATGTAGCT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCTTCAGTC 546
                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----TTCCAGGAGATGCCTACACCGATTATGTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
91.3%; Score 863; DB 6; 1
Best Local Similarity 94.5%; Pred. No. 9.2e-187;
Matches 927; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 AAGATTTGTGACTTCGGGTTTGCACAAATTCTGA----
                                             DNA
                                                                                                                                                                                                                                                                                                                                                     1. .1083
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                              896 GTAATGAAGGAAGAACAGAAGACGCCAACAG
                                                                                                                          AX166534 1083 bp
Sequence 25 from Patent WO0138503.
AX166534
                                                                                                                                                                   AX166534.1 GI:14546879
                                                                                                                                                                                               Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     455
                                                                                              RESULT 7
AX166534
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                             ò
                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                               250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            895
                                                                                                                                                                                                                                                                                                                                           238
                                                                                                                                                                                                                                                                                                                                                                                                   ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTT 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 970
                                                                                                                                                                                                                              TGATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTA-TGTTGAAGCAATTAAAAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                         ATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAA 418
                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GITCITCAGICCAIAIAIGGGCIAITGGITGITTITGCAGAGCICCTGACAGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACTCCTGGAGAGCTCCTACTTTGATTCTTTCAAGAGGCCCAAATTAAAAGAAAAGCCC
                                                                                                                                                                                                                                                                     TGCAGA-AACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGA
                                                                                                                                                                                                                                                                                    ATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        551 rcaagarrigrgacricgggrrigcacaaarrcrgarrccaggagargccracaccarr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGG
                                                                                                                                                                                                               ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                 ATCCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGTAGCTA-CGAGATGGTACCGAGCT-CCTGAACTTCTTGTGGGAGATACT-CAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATTAATCCCAAGACATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCTGAACTTCATGAAGGGGTGTCTGAAGATGAGTCCAGATGACAGATTAACCTGTTCCC
                                                                                                                                                                                     Gaps
                                                                                                                                                                                   .,
2
                                                                                                                                                         Length 1678
                                                      1. 1678
/organism="Homo sapiens"
/organism="Homo sapiens"
/mol type="unassigned DNA"
/db_xref="taxon:9606"
/note="Incyte ID No: LI:058298.1:2001JAN12"
                                                                                                                                                                                   Indels
Molecules for diagnostics and therapeutics Patent: WO 02079471-A 6 10-0CT-2002; Incyte Genomics, Inc. (US)
                                                                                                                                                      91.9%; Score 868.8; DB 6;
99.2%; Pred. No. 4.1e-188;
tive 0; Mismatches 2;
                                                                                                                                                       Query Match
Best Local Similarity 99.2
Matches 925; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116
                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                   179
                                                                                                                                                                                                                                                                                                                                                                                                              311
                                                                                                                                                                                                                                                                                                                                                                                                                                          239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              836
 TITLE
JOURNAL
                                           PEATURES
                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                        q.
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
```

9

240

454

		OY 925 CAGGTACTTCCGCTCAAAAGT 1041  RESULT 9  AX10720  LOCUS  AX107720  AX107720  LOCUS  AX107720
Db   541   ACGAGATGGTACCGAGCTCCTGAACTTCTTGGGAGATACTCAGTATGGTTCTTCAGTC 600	RESULT 8 AR492169 LOCUS Sequence 9 from patent US 6716616. ACCESSION AR492169 ACCESSION AR492169 ACCESSION AR492169 ACCESSION AR492169 ACCESSION AR492169.1 GI:47260679 KEYWORDS Unknown. ORGANISM Unclassified. Unclassified. TITLE AUTHORS Donoho, G., Turner, C.A. Jr., Nehls, M.C., Friedrich, G., Zambrowicz, B. TITLE AUTHORS Donoho, G., Turner, C.A. Jr., Nehls, M.C., Friedrich, G., Zambrowicz, B. TITLE LOCation/Qualifiers SOURCE 1. 1041 AUTHORNAL PATENTE Human kinase proteins and polymucleotides encoding the same LOCATION AUTHORNAL PATENTE Human kinase proteins and polymucleotides encoding the same LOCATION/QUALIFIERS 11041 AUTHORNAL AUTHORNAL PATENTE Human kinase proteins and polymucleotides encoding the same LOCATION/QUALIFIERS 11041 AUTHORNAL AUTHORNAL PATENTE Human kinase proteins and polymucleotides encoding the same LOCATION/QUALIFIERS 11041 AUTHORNAL	Query Match         88.84; Score 839; DB 6; Length 1041;           Best Local Similarity 90.84; Pred. No. 2.8e.181;         96; Gaps 1;           Matches 945; Conservative 0; Mismatches 0; Indels 96; Gaps 1;         0; Indels 96; Gaps 1;           Qy         1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTTGTATTCAAA 60           Db         1 TGGAGAAACAAAACAAAACTGGAGAAGTAGTAGTAGTAGAATTTGTGGAATCTGAAGAT 120           Cy         61 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120           Db         61 TGCAGAAACAAAACACAAGAGAAAAAGAGAAAAAAATGTGTGAAAAATTAAAAAAT 120           Cy         121 GATCCTGTTGTTAAGAAAATAGCATAAGAGAAATACGTATGTGAAGCAATTAAAACAT 180           Db         121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAAAAGGAAAAAGGAATTAAAAACT 180           Cy         181 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAAAAGGAAAAAGGAAATTAAAAACT 180           Cy         181 CCAAATCTTGTGAACCTCATCGAGGGGAAAAAAGGAAAAAGGAAAATGCATTTAGTTTTT 240           Db         181 CCAAATCTTGTGAACCTCATCGAGGGGAAAAAAGGAAAAAGGAAATGCTTTAGTTTTTT 240           Cy         241 GAATACTTGTGAACACTTTAAATGAGTTCAGGAAAAAAAGAAAAAGGAAATGCTTTAGTTTTTT 240

PEATURES BOULCE ORIGIN	Location/Qualifiers 1. 1041 /organism="Homo sapiens" /mol type="unassigned DNA" /db_xref="taxon:9606"	a & a	ATGAATCCAGATGACAGATTAAA TTTCAAGAGGCCCAAATTAAAA 
Query Match Best Local Matches 94	Match 88.8%; Score 839; DB 6; Length 1041; ocal Similarity 90.8%; Pred. No. 2.8e-181; s 945; Conservative 0; Mismatches 0; Indels 96; Gaps 1;	ò a	925 CAGTACTTCCGCTCAAAGT 945 
& 93	1 ATGGAAAAGTATGAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGGTTGTATTCAAA 60 	RESULT 10 AR492166 LOCUS	AR492166 1068 bp
çy qa	61 TGCAGAAACAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT 120 	DEFINITION ACCESSION VERSION KEYWORDS	Sequence 3 from patent US AR492166 AR492166.1 GI:47260676
S S	121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 	SOURCE ORGANISM REFERENCE	Unknown. 1 Unknown. 1 (bases 1 to 1068)
& 93 13	181 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT 240 	TITLE JOURNAL	Donono, Untraer, C.A. Jr., Nenls, M.C., Friedrich, G., Zambrowicz, B. and Sands, A.T. Human kinase proteins and polynucleotides encoding the same Patent: US 6716616-A 3 06-APR-2004;
\$ 9 9	241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAGCCCAAATGGAGTTGCTGAT 300 241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	FEATURES	ψ
& 93	301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360 	ORIGIN  Query Ma  Best Loc	tch 87.1%; Score 823; DB 6; Length 1068; al Similarity 90.6%; Pred. No. 1.3e-177;
& 43	361 AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGGAAGAATAATC 420 	Matc	929; Conservative 0; Mismatches 0; Indels 96; Gaps 1 ATGGAAAAGTATGAAAAATTAGCTAAAAAACTGAGAGAAGGGTCTTATGGGGTTGTATTCAAA
& a	421 AAGATTIGIGACTICGGGTTIGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT 480	g & i	RIGGARANGIALGARARATIAGCIARGACIGGRGRAGGGGICIIRIGGGGGIIGIRIICARA TGCAGADACAADACCCTGGACAAGTAGTAGCTGTTAADAAAATTTGTGGAATCTGAAGAT 
ර සි	481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540	g &	61 IGCAGAAACCICICAGACAAGIAGIAGIAGCIGITAAAAATITULGAAICIGAAGAI 120 121 GATCCIGITGITAAGAAAATAGCACTAAGAGAATACGTATGITGAAGCAATTAAAACAT 180
ςς Ωp	TCAGTCGATATATGGCCTATTGGTTGTTTTTGCAGAGCTCCTGACAGGCCAGCCA	a ya	GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
S S	601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT 650 	a &	CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA
È	651	අ &	241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA
음 &	661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720	2 음	
<b>3</b> 8	GTAGCCTCTCAAAGTGCTGGAATTACAGGAAAATTAATCCCAAGACATCAATCA	දු සි	36.1. PACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420           36.1. PACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC 420
& 43	685 AAAAGTAACGGGTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTT 744	8 8	AAGATTIGIGACTICGGGTTTGCAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
Š Ģ	745 GAGGAAAAGTICTCAGAIGTICAICCIGIGGCTCTGAACTICAIGAAGGGIGICTGAAG 804 	8 &	ANGALITICIGACITICACACATATATICACAGAGATACACAGATATATATATATATATATATATATA
ò	805 AIGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGGCTCCTACTTGATTCT 864	요 & 	481 GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT 540 541 TCAGTCGATATATGGGCTATTGGTTGTGTTTTTGCAGAGCTCCTGACAGGCCAGCCA

Db 121 GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180 Oy 181 CCAAATCTTGTGAACCTCATCGAGGAGAAAAAAGAAAAAGCAAATTAAAACTT 240	181 CCAAATCTTGTGAAACTCGACGTGTTCAGGAGAAAAAGGAAAATGCATTTTGT	Oy 241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGCACCAAATGGAGTTGCTGAT 300  Db 241 GAATACTGTGATCATACACTTTTAAATGAGCTGGAAAGAAA	ო ო	4 4	8 4 8 8		QY         541 TCAGTCGATATATGGGCTATTGGTGTTTTTTGCAGAGCTCCTGACAGCCCAGCCAG	QY         601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACT 650	Ογ 651 650	661	Db 721 GTAGCCTCTCAAAGTGCTGGAAATTAATCCCAAGACATCAATCA	7		OY 745 GAGGAAAGTICTCAGAIGTICATCCTGTGGCICTGAACTICATGAAGGGGTGTCTGAAG 804	QY 805 ATGAATCCAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTACTTGATTCT 864	OY 865 TITCAAGAGGCCCAAATTAAAAGAAAAGGCACGTAATGAAGGAAACAGAAGCGCCAA 924	Oy 925 CAGGT 929        Db 1021 CAGGT 1025	069 nce 3 fr 069 069.1 G	SOURCE Homo sapiens (human) ORGANISM Homo sapiens
	601 TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGTAGAGACG 6	QY 651 650  Db 661 GGGTTTCGCCATGTTGACCAGGCTGGTCTCGAACTCTTGACGTCAAGTGATCCACCTGCC 720	OY 651	Qy 685 AAAAGTAACGGGTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACATGGAACTCTT 744	OY 745 GAGGAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAG 804	OY 805 AIGAATCAGAIGACAGAITAACCIGITCCCAACTCCIGGAGAGCTCCTACITIGAITCT 864	OY 865 TTTCAAGAGGCCCAAATTAAAAGAAAAGCACGTAATGAAGGAAG	Qy 925 CAGGT 929        Db 1021 CAGGT 1025	RESULT 11	1068 bp	AX107714 AX107714.1	ΣW	Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	ARFEKENCE 1 AUTHORS Donoho,G., Turner,C.A., Nehls,M., Friedrich,G., Zambrowicz,B. and Sands,A.T. TITLE Human kinase proteins and polymorphoptians on adding the contract.	JOURNAL Patent: WO 0123579-A 3 05-APR-2001; Lexicon Genetics Incorporated (US) FEATURES SOURCE 1 1068		Query Match 87.1%; Score 823; DB 6; Length 1068; Best Local Similarity 90.6%; Pred. No. 1.3e-177; Matches 929; Conservative 0; Mismatches 0; Indels 96; Gaps 1;	OY 1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA 60	QY 121 GATCCTGTTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 180

```
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                       Query Match
                                                                                       source
                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                              Matches
               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                     CDS
                                                                         FEATURES
                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 20-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                     1 ATGGGAAAGTATGAGATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                      GATCCTATTGTTAAGAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                         TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                         GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                         CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                      CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       reagregatararagecrarregrargrerrrracagaecrecreacageceagecacre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGTA
                                                                                                                                                                                                 .;
0
                                                                                                                                                                        Length 687;
                                                                                                                                                                                                5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                               14257, protein kinase molecules and uses therefor
Patent: WO 0179488-A. 3 25-OCT-2001;
Millennium Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                                                                                                                                                      Score 647; DB 6; I
Pred. No. 2.3e-137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                0; Mismatches

    .687
    /organism="Homo sapiens"
    /mol_type="unassigned DNA"
    /db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX286067 882 bp
Sequence 1 from Patent WO0179488.
AX286067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX286067.1 GI:17045993
                                                                                                                                                                      68.5%;
99.2%;
                                    Kapeller-Libermann, R.
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                Matches 650;
                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                      REFERENCE
AUTHORS
                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX286067
LOCUS
                                                                                     PEATURES
                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
```

```
/codon start=1
/bpotein_id="CAD12176.1"
/db.xref="G1:17045994"
/translation="MGKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPIV
kranslation="MGKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPIV
kranaRightikQLKHPRIVALIEVFRRKRAKHLIARBEALINBEARNPRGYADGV
IKSVLMQTLQALNFGTHNOTHENKPRENILITKQGIIKICDFGFAQILIPGDAYTDV
VATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLLIRTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGGAAAGTATGAAAATTAGCTAAGACTGGAGAAAGGGTCTTATGGGGTTGTATTCAAA 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAATTTTGTGGAATCTGAAGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCTATTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 GGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGATTTGTGACTTCGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACGGATTAT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189 TGCAGAAACAAAACCTCTGGACAAGTAGTAGCTGTTAAAAAATTTGTGGAATCTGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        309 CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGATTTGTGACTTCGGGTTTGCACAATTCTGATTCCAGGAGATGCCTACACGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGCTACGAGATGCTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ATGGAAAAGTATGAAAAATTAGCTAAGACTGGAGAAGGGTCTTATGGGGTTGTATTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCTGTTGTTAAGAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAATACTGTGATCATACACTTTTTAAATGAGCTGGAAAGGAAACCCAAATGGAGTTGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACTGTATTCACAGAGATATAAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAAATCTTGTGAACCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCAGTATGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TIGCCTGGAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAA 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGTA 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 882;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 647; DB 6; 1
Pred. No. 2.2e-137;
0; Mismatches 5;
Kapeller-Libermann, R. 14257, protein kinase molecules and uses Patent: WO 0179488-A 1 25-OCT-2001; Millennium Pharmaceuticals, Inc. (US)
                                                                                                                                                                                                                                                                   /note="unnamed protein product"
                                                                                                                                 1. .882
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
129 .815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68.5%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MNCITWOOSC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
```

```
PAT 13-JAN-2001
                                                                        Murinae gen. sp.
Murinae gen. sp.
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae.
                                                                                                                                                                                                                                                                                                                                                                                  135 GAAAATAGCACTAAGAGAAATACGTATGTTGAAGCAATTAAAACATCCAAATCTTGTGAA 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        734
                                                                                                                                                                                                                                                                                                                                                                                                                  57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195 CCTCATCGAGGTGTTCAGGAGAAAAGGAAAATGCATTTAGTTTTGAATACTGTGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             118 CACACTGTTAAACGAGCTGGAGAAACCCAAACGGAGTTTCTGATGGAGGAGTTAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178 TGTGCTATGGCAAACCCTTCAAGCCCTTAACTTCTGTCACAAGGCACAATTGTATTCGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         298 TGGATTTGCACGAATTCTAATTCCAGGAGACGCCTACACAGACTATGTTGCCACCAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTACCGAGCCCCCGAACTTCTCGTGGGAGACACGAAGTACGGTTCCTCTGTAGACGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                             1 GAAAATAGCCCTGCGGGAAATCCGTATGCTGAAG---trgaaacacccaaacctcgrgaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         255 TACACTITIAAATGAGCTGGAAAGAAACCCAAATGGAGTTGCTGATGGAGTGATCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  315 CGTATTATGGCAAACACTTCAAGCTCTTAATTTCTGTCATATACATAACTGTATTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              375 AGATATAAAACCTGAAAATATTCTAATAACTAAGCAAGGAATAATCAAGATTTGTGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGTTTGCACAAATTCTGATTCCAGGAGATGCCTACACCGATTATGTAGCTACGAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTACCGAGCTCCTGAACTTCTTGTGGGAGATACTCCAGTATGTTCTTCAGTCGATATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                555 GCTATIGGITGIGITITIGCAGAGCICCIGACAGGCCAGCCACTGIGGCCTGGAAAAIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        615 AGATGTGGACCAACTTTATCTGATAATCAGAACACTAGGAAAATTAATCCCAAGACATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478 CGACGIGGACCAGCITIACCIGAICAICAGGACGITGGGAAGCIGAITCCAAGACACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                735 GGAAACTCTTGAGGAAAAGTTCTCAGATGTTCATCCTGTGGCTCTGAACTTTCATGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       675 ATCAATCTTTAAAAGTAACGGGTTTTTCCATGGCATCAGTATACCTGAGCCAGAAGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               538 GTCTATCTTTAGGAGTAACCAGTTTTTCCGCGGCATCAGCATACCTGAACCAGAGGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     795 GTGTCTGAAGATGAATCCAGATGACAGATTAACCTGTTCCCAACTCCTGGAGAGCTCCTA
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                       3;
                                                                                                                                                                                                                                                                                                                     Query Match 59.2%; Score 559.2; DB 6; Length 2615; Best Local Similarity 81.8%; Pred. No. 2.3e-117; Matches 658; Conservative 0; Mismatches 143; Indels 3;
                                                                                                                                                   Plowman,G.D., Martinez,R., Whyte,D. and Sudersanam,S. Protein kinases
Patent: WO 0073469-A 49 07-DEC-2000;
Sugen, Inc. (US)
    DNA
                                                                                                                                                                                                                              1. .2615
/organism="Murinae gen. sp.
/mol_type="unassigned DNA"
/db_xref="taxon:39108"
AX056405 2615 bp
Sequence 49 from Patent WO0073469.
                                                                                                                                                                                                                Location/Qualifiers
                              AX056405
AX056405.1 GI:12229112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   495
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
            PAT 13-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 TITCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATTCTAATAAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACTCAGIAIGGIICITCAGICGATATAIGGCTATIGGIIGITTTTTTGCAGAGCICCI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        824
                                                                                                                                                                                                                                                                                                                                                                                       285 AAATGGAGTTGCTGATGGAGTGATCAAAAGCGTATTATGGCAAACACTTCAAGCTCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTCTGTCATATACATAACTGTATTCACAGAGATATAAAACCTGAAAATATTCTAATAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 TAAGCAAGGAATAATCAAGATTTGTGACTTCGGGTTTGCACAAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                             405 TAAGCAAGGAATAATCAAGATTTGTGACTTTGGGGTTTGCACAAATTCTGATTCCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 IGCCTACACCGATTATGTAGCTACGAGATGGTACCGAGCTCCTGAACTTCTTGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACAGGCCAGCCACTGTGGCCTGGAAAATCAGATGTGGACCAACTTTATCTGATAATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 TACTCAGTATGTTCTTCAGTCGATATATGGGCTATTGGTTGTTTTTGCAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           825 AACCTGTTCCCAACTCCTGGAGGCTCCTACTTTGATTCTTTTCAAGAGGCCCAAATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         645 AACACTAGGAAAATTAATCCCAAGACATCAATCAATCTTTAAAAGTAACGGGTTTTTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCATCAGTATACCTGAGCCAGAAGACATGGAAACTCTTGAGGAAAGTTCTCAGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCATCCTGTGGCTCTGAACTTCATGAAGGGGTGTCTGAAGATGAATCCAGATGACAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     °,
                                                                                                                                                         Plowman, G.D., Martinez, R., Whyte, D. and Sudersanam, S. Protein kinases
Parenti WO 0073469-A 48 07-DEC-2000;
Sugen, Inc. (US)
                                                                                                                                                                                                                                                                                                                             68.0%; Score 643; DB 6; Length 911; 100.0%; Pred. No. 1.8e-136; .ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        885 AAGAAAAGCACGTAATGAAGGAAGAAACAGAAGACGCCAACAG 927
           DNA
                                                                                                                                                                                                                                     1. .911
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
    Sequence 48 from Patent WO0073469.
AX056404
                                                                                                                                                                                                                      Location/Qualifiers
                                                   AX056404.1 GI:12229111
                                                                                 sapiens (human)
                                                                                                                                                                                                                                                                                                                                                          Matches 643; Conservative
                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                 Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                    345 '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
      LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                 엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
```

RESULT 15 AX056405

Search completed: April 21, 2005, 23:37:14 Job time : 4113.75 secs

THIS PAGE BLANK (USPTO)

```
April 22, 2005, 01:23:15 ; Search time 87.5529 Seconds (without alignments) 1391.497 Million cell updates/sec
                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 315
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                   2105692 segs, 386760381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                        OM protein - protein search, using sw model
                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A_Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqp2000s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  geneseqp1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 geneseqp1980s:*
                                                                                                                                                                                                                                                                                                                                                                                           length: 0
length: 2000000000
                                                                                                                                                                                   US-10-766-691-12
                                                                                                                                                                                                    1662
                                                                                                                                                                                                                                                                                                                                                                                           DB sed DB sed
                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                           Minimum I
Maximum I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                           Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

geneseqp2003as:\* geneseqp2003bs:\*

geneseqp2004s:\*

geneseqp2001s:\* geneseqp2002s:\*

## SUMMARIES

Description	95	Aae19152 Human kin	Aae00492 Human kin	Aae00494 Human kin	Aau03525 Human pro	Aae00491 Human kin	Aab65643 Novel pro	Mouse	Abp62954 Human pol	Ado01538 Human cyc	Novel	Human	_	_	Aay90724 Rabbit KK	Abull689 Human MDD	Adc77659 Human 162	Adq89156 Human uro	Human	Adi40875 Human kin	Aae00490 Human kin	Aae00493 Human kin	Adk71868 Human kin	Aay70126 Human los	Adis7233 NKIAMRE d
Π	AAE00495	AAE19152	AAE00492	AAE00494	AAU03525	AAE00491	AAB65643	AD129250	ABP62954	ADO01538	AAB65642	ADI29249	AAG78547	ABB63118	AAY90724	ABU11689	ADC77659	ADQ89156	ABP96087	AD140875	AAE00490	AAE00493	ADK71868	AAY70126	ADI57233
DB	4	ហ	4	4	4	4	4	Φ)	w	60	4	œ	ហ	4	٣	ø	7	œ	9	α	4	4	œ	m	œ
% Query Match Length DB		342	324	347	360	356	296	296	358	358	247	247	228	392	266	197	493	493	362	183	187	198	205	455	455
% Query Match	100.0	98.6	98.6	98.4	97.4	97.0	78.0	78.0	71.5	71.2	69.1	69.1	9.89	61.8	58.2	57.0	9.95	9.95	56.4	47.6	47.6	47.6	47.6	47.2	47.2
Score	1	1639	1638	1636	1619	1612	1296.5	1296.5	1188.5	1183.5	1149	1149	1140	1027.5	967.5	948	941.5	941.5	937.5	791	791	791	791	784.5	784.5
Result No.	-	7	e	4	'n	9	7	80	0	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

The present sequence is novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical

Claim 3; Page 33-34; 38pp; English.

(				,	•				
N		4.5	٠	455	20		AG15/214		
0		14.5		455	œ	ADI57236	Adi57236	CDK3 domi	
7		14.5	47.2	591	4	AAU03524	Aau03524	Human pro	
7		3.5		457	٣	AAY70125	Aay70125	Rat lost	
٣		3.5		505	m	AAY70124	Aay70124	Rat lost	
m		725	٠	562	œ	ABM83922	Abm83922	Human dia	
m		2.5		154	9	ABU05290	Abu05290	Human dia	
М		959	6	534	4	AAB65645	Aab65645	Novel pro	
٣		. 959	6.	534	œ	ADI29252	Adi29252	Human MAR	
3	35	581	35.0	305	7	ADF45039	Adf45039	Human kin	
m		581	'n.	305	7	ADJ68738	Adj68738	Human hea	
m		581	δ.	305	æ	ADI57200	Adi57200	Human CDK	
m		581	ď.	305	æ	AD157237	Adi57237	CDK3 domi	
٣		581	2	333	4	AAM39276 .	Aam39276	Human pol	
4		574	4.	352	4	AAM41062	Aam41062	Human pol	
4		570	4	298	7	AAW95689	Aaw95689	Homo sapi	
4	2	570	4	544	7	AAW85028	Aaw85028	CDK2-gree	
4	m	570	4.	544	~	AAW85029	Aaw85029	Green flu	
4	4	569	4.	224	4	ABG06142	Abq06142	Novel hum	
4	πύ	569	4.	298	7	ADD21390	Add21390	Human cyc	
						ALIGNMENTS			
RESULT 1	T 1								
a	AAE00495		standard;	protein;	in;	315 AA.			
×									
A A	AAE00495	195,							
(E)	19-JUN	9-JUN-2001	(first	t entry)	\$				
は記	Human	Human kinase	. #6.						
×									
%	Human; kin biological	ro .	se; gene disorder.		ару	therapy; bioreactor; mental disc	disorder;		
X	,								
Ü	CHOM	CHOLCHUS CHOL							

New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases. Zambrowicz B; Friedrich G, Turner CA, Nehls M, 28-SEP-1999; 99US-0156511P. 27-SEP-2000; 2000WO-US026621. (LEXI-) LEXICON GENETICS INC. WPI; 2001-266166/27. N-PSDB; AAD03817. WO200123579-A1 Homo sapiens. 05-APR-2001. Donoho G, Sands AT;  ä

```
probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                       SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                           EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                  PNLVNLIEVFRKRKKKKHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                   Gaps
       The labelled NHP
                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                 Length 315;
                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                           100.0%; Score 1662; DB 4;
100.0%; Pred. No. 1.5e-168;
iive: 0; Mismatches 0;
 disorders. NHP oligonucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EGRNRRRQQVLPLKS 315
                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 315; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EGRNRRRQQVLPLKS
                                                                                                                                                                            Sequence 315 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
a
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

Human kinase polypeptide (PKIN-10). Ä. AAE19152 standard; protein; 342 21-MAY-2002 (first entry) AAE19152, 

Human; kinase polypeptide; PKIN-10; gene therapy; Addison's disease; leukaemia; immune disorder; lymphoma; melanoma; developmental disorder; acquired immunodeficiency syndrome; AIDS; allergy; anamia; hypertension; asthma; Crohn's disease; rheumatoid arthritis; bursitis; atherosclerosis; cirrhosis; hepatitis; psoriasis; Cushing's syndrome; cytostatic; cancer; cholestasis; cardiant; cardiovascular disorder; Niemann-Pick's disease; lipid disorder; fatty liver; Gaucher's disease; myocardial infarction; drug screening; transgenic animal; antiinflammatory; hepatotropic; hypotensive; anti-HIV; enzyme

셤 ò g ò 셤 ઠે 셤 ò 셤 ò

Homo sapiens

Domain

/note= "Eukaryotic protein kinase domain' Location/Qualifiers 4. .286

WO200208399-A2

31-JAN-2002

20-JUL-2001; 2001WO-US023092

```
The present invention relates to an isolated human kinase polypeptide (PKIN) or a biologically active/immunogenic fragment of PKIN. PKIN is useful for diagnosing, treating and preventing cancer (e.g., Deukaemia, I ymphoma, melanoma), an immune disorder (e.g., acquired immunodeficiency syndrome (AIDS), Addison's disease, allergy, anaemia, asthma, Crohn's disease, rheumatoid arthritis), a growth and developmental disorder (e.g. bursitis, cirrhosis, hepatitis, psoriasis, Cushing's syndrome), a cardiovascular disorder (e.g., atherosclerosis, hypertension, myocardial infarction), and a lipid disorder (e.g., fatty liver, cholestasis, Gaucher's disease, Niemann-Pick's disease). PKIN is useful in a number of cirry screening techniques and to analyse the proteome of a tissue or cell type. PKIN is useful for creating knockin humanised animals or transgenic animals to model human diseases, in sometic or gernling gene therapy, to generate a transcript image of a tissue or cell type, for detecting differences in the chromosomal location due to translocation, inversion, etc., among normal, carrier or affected individuals, and as Pybridisation probes for mapping naturally occurring genomic sequences. PKIN is useful in southern or northern analysis, dot blot or other membrane-based to mouther to morthern analysis, in disptick, pin, multiformat enazyme linked immunosorbent (ELISA)-like assays and in microarrays utilishing the sequence is human PKIN-10
                                                                                                                                                                                                                                                                                                                                                                                         New human kinase polypeptide, useful in diagnosis, prevention and treatment of cancer, immune disorder, growth and developmental disorder, cardiovascular disorder and lipid disorder.
                                                                                                                                                                                  Thornton M, Yue H, Khan FA, Gururajan R, Hafalia AJA, Walia NK;
Patterson C, Ramkumar J, Gandhi AR, Policky JL, Baughn MR;
Tribouley CM, Bandman O, Nguyen DB, Lu Y, Burford N, Lal P, Ding
Yao MG, Elliott VS, Recipon SA, Kearney L, Lu DAM, Greenwald SR;
Tang YT, Xu Y, Walsh RT, Gietzen KJ, Yang J, Hillman JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 147-148; 196pp; English
; 2000US-0220038P.
; 2000US-022112P.
; 2000US-0222831P.
; 2000US-0224729P.
                                                                                                                 GENOMICS INC.
                                                                                                                                                                              Yue H, Khan F,
Ramkumar J,
M, Bandman O,
                                                                                                                                                                                                                                                                                                                          2002-206083/26.
                                                                                                                                    THORNTON M.
                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAD30557.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 342 AA;
                                                                                                                 INCYTE
                   28-JUL-2000; 2
04-AUG-2000; 2
11-AUG-2000; 2
                                                                                                                                       (THOR/)
                                                                                                                 (INCX-)
```

9; DB 5; 4.9e-166; ; Score 1639; DB ; Pred. No. 4.9e-1; Mismatches 98.6%; Best Local Similarity 99.0 Matches 312; Conservative Query Match

Gaps

2;

o,

Length 342; Indels

120 120 9 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 61 PNLVNLIEVFRRKRKKKKKKKKTOFTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMLKOLKH 61 PNLVNLIEVFRKRKRMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 181 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 181

EGRNRRRQ--QVLPL 313 301

241

241

**EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN** 

```
The present sequence is novel human protein (NHP) known as human kinase.

The human kinases share structural similarity with animal kinases, more particularly series or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products calated to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying colymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zambrowicz
                                                                                                                                                                                                                                                           Human; kinase; gene therapy; bioreactor; mental disorder; biological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nehls M, Friedrich G,
                                                                                                                AAE00492 standard; protein; 324 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 30; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                             27-SEP-2000; 2000WO-US026621.
301 EGRNRRRQQNQLLPL 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0156511P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Turner CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-266166/27.
N-PSDB; AAD03814.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 324 AA;
                                                                                                                                                                                                                                 Human kinase #3
                                                                                                                                                                                                                                                                                                                                                                  WO200123579-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-SEP-1999;
                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                            19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Donoho G,
Sands AT;
                                                                                                                                                        AAE00492;
                                                                             RESULT 3
                                                                                                                      음
```

```
ö
                               ;
0
         Length 324;
                              Indels
        Score 1638; DB 4; L
Pred. No. 5.8e-166;
98.6%; Scor.
100.0%; Pred. No. 5...
'... 0; Mismatches
                               Conservative
                 Local Similarity
tes 310; Conserv
         Query Match
                     Best Loca
Matches
```

9 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMLKQLKH

PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120

61

Š

셤 ઠે

240 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240 241 BPEDMETLEEKFSDVHPVALNFWKGCLKANPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS Human; kinase; gene therapy; bioreactor; mental disorder; AAE00494 standard; protein; 347 AA. 27-SEP-2000; 2000WO-US026621 (first entry) EGRNRRRQQV 310 EGRNRRRQQV 310 biological disorder. Human kinase #5. WO200123579-A1 19-JUN-2001 Homo sapiens 05-APR-2001. AAE00494; 121 121 181 181 301 301 241 셤 ò g ద 8 셤 ò ઠે

28-SEP-1999; 99US-0156511P.

(LEXI-) LEXICON GENETICS INC.

Zambrowicz B; Friedrich G, Turner CA, Nehls M, Donoho G, Sands AT;

WPI; 2001-266166/27. N-PSDB; AAD03816. New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.

Claim 2; Page 32-33; 38pp; English.

The present sequence is novel human protein (NHP) known as human kinase.

The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase CDNA is useful for the detection of mutant human kinase. Human kinase CDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs of effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in classed to human kinases, and as reagents in assays for screening classocial or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP colymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP

```
217
                                                                                                                                                                                                                PNLVNLIEVERRKKRØHLVFEYCDHTLINELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                              268
                                                                                                                                                                                                PNLVNLIEVFRRKRKWHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                   NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                     SVDIWAIGCVFAELLIGOPLWPGKSDVDOLYLIIRTLVETGFRHVDQAGLELLISSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                         241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFWKGCLK 300
                                                                                                                                                   9
                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic acids encoding human kinase polypeptides, useful for preventing diagnosing and/or treating e.g. cancer, immune, cardiovascular and neuronal-associated diseases, and microbial infections.
                                                                                                                                                               products are used to genetically engineer cells in vivo that functions bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                          -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human, protein kinase, PTK, STK, cancer; cardiovascular disease;
metabolic disorder; immune related disease; neurological disorder;
neurodegenerative disorder; inflammatory disorder; infectious disease;
                                                                                                                        Gaps
                                                                                          Score 1636; DB 4; Length 347;
Pred. No. 1e-165;
0; Mismatches 0; Indels 32;
                                                                                                                                                                                                                                                                                                                                                                                                           MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                          Martinez R;
                                                                                                                                                                                                                                                                                                       SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIRTL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G, Sudarsanam S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU03525 standard; protein; 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Manning
                                                                                         98.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-NOV-2000; 2000WO-US032085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0167482P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                     Best Local Similarity 90.8
Matches 315; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human protein kinase #25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 reproductive disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Whyte D,
Clary D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-343950/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SUGE-) SUGEN INC.
                                                                 Sequence 347 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAS06725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200138503-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Flanagan P,
                                                                                                                                                                                                                                                                                                                                                                                                             269
                                                                                            Query Match
                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU03525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plowman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8888888
                                                                                                                                                                    g
                                                                                                                                                                                                8
                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                          δ
```

```
AAU03501-AAU03557 represent novel human protein kinases #1-57. The novel protein kinases have been identified as members of the tyrosine or serine/threonine kinase (PTK and STK) families. The polymotheotides carried/threonine kinase (PTK and STK) families. The polymotheotides carried/threonine kinases and the polymothides may be used in the provention, diagnosis and treatment of diseases associated with anappropriate kinase expression. For example, they may be used to treat ancers (especially cancers of hemantopoietic origin), cardiovascular disease (e.g. atherosclerosis), metabolic disorders (e.g. diabetes), immune related diseases (e.g. rheumatodid arthritis), neurological disorders (e.g. schizophrenia), neurological disorders (e.g. disease), inflammatory disorders (e.g. asthma), infectious disease (e.g. HIV) and reproductive disorders (e.g. infertility). Additionally, polymuclectides encoding protein kinases may be used for gene therapy and as DNA probes in diagnostic assays. The protein kinase against the protein kinase santigens in the production of antibodies against the protein kinase such activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PNLVNLIEVERRKRKNHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIP 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 PNLVNLIEVFRRKRKMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKIGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 NCIHRDIKPENILITKQGIIKICDFGFAQIL------IPGDAYTDYVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 TRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RHOSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLE
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                     20;
                                                                                                                                                                                                                                                                                                                                                                                                     Length 360;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; kinase; gene therapy; bioreactor; mental disorder; biological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                               Score 1619; DB 4;
Pred. No. 7.3e-164;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSYFDSFQEAQIKRKARNEGRNRRRQ--QVLPL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 7; Fig 2; 433pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE00491 standard; protein; 356
                                                                                                                                                                                                                                                                                                                                                                                               97.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2000; 2000WO-US026621,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0156511P.
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 93.4°
Matches 311; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                             Sequence 360 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200123579-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE00491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
8X X C C C C C C C C C C C C C C X X S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
```

```
The present sequence in the indicative with animal kinases. The human kinases hare structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinases con the disponsis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations effective in the treatment of symptomatic or phenotypic manifestations of perturbing the normal function of NHP in the body. The NHP mucleotide sequences are useful for generation of antibodies, as reagents in disponsite assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disponders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying probes are useful for screening human genomic library for identifying colymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in disponsities and pharmacogenomics. Nucleotide construct encoding NHP to the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                novel human protein (NHP) known as human kinase
                                                                                                                                                                                                                      New isolated human kinase polymucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                       ä
                                                                       Zambrowicz
                                                                       Turner CA, Nehls M, Friedrich G,
                                                                                                                                                                                                                                                                                                                              Disclosure; Page 28-29; 38pp; English.
                     (LEXI-) LEXICON GENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                sequence is
                                                                                                                                               2001-266166/27
                                                                                                                                                                            N-PSDB; AAD03813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 356 AA;
                                                                    Donoho G,
Sands AT;
```

1; 241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFWKGCLK 300 120 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120 9 9 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS SVDIWAIGCVFAELLTGOPLWPGKSDVDOLYLIIRTL -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 97.0%; Score 1612; DB 4; Length 356; 90.6%; Pred. No. 4e-163; iive 0; Mismatches 0; Indels 32; Gaps Best\_Local Similarity 90.6 Matches 310; Conservative 61 121 181 Query Match 181 218 ઠે g 8 g ò a ò g 8 셤 ઠે

```
46 KIALREIRMLKOLKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKS 105
                                                                                                                                                                                                                                                           106 VLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRW 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180 SIFRSNQFFRGISIPEPEDMETLEEKFSNVQPVALSFWKGCLKONPDERLTCAQLLDSAX 239
                                                                                                                                                                                                                                                                                                                                                                                                                                            226 SIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSY 205
                                                                                                                                                                                                1 KIALREIRMLK-LKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVSDGVIKS
                                                                                                                                                                                                                                                                                                         60 VLWQTLQALNFCHKHNCIHRDVKPENILITKQGMIKICDFGFARILIPGDAYTDYVATRW
                                                                                                                                                                                                                                                                                                                                                     YRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQ
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                             ٠<u>.</u>
                                                                                  78.0%; Score 1296.5; DB 4; Length 296; 90.0%; Pred. No. 1.7e-129; ive 19; Mismatches 5; Indels 3;
                                                                                                         Best Local Similarity 90.0
Matches 243; Conservative
                                           Sequence 296 AA;
                                                                                                                                                                                                                                                                                                                                                         166
                                                                                       Query Match
                                                                                                                                                                           8
                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                240
180
                                                                                    217
                                                                                                                                                                                                                                                                                         MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                  MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 310
```

AAB65643 standard; protein; 296

RESULT 7 AAB65643 AAB65643;

SXXX

569 301

셤

ñ

```
The present sequence is a novel protein kinase. The novel protein kinases and the nucleic acids that encode them may be used in the treatment and diagnoshis of diseases associated with inappropriate kinase expression cuch as immune-related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers. The nucleic acids and complementary sequences may also be used as DNA probes in diagnostic assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Anti-kinase antibodies expression and activity, Diseases related to kinase expression and activity. Diseases related to kinase expression and activity include rheumatorid arthritis, atherosclerosis, autoimmune disorders, cardiomyopathies, strokes, renal failure, oxidative-stress related disorders, chronic inflammatory powel disease, chronic inflammatory pelvic disease, multiple sclerosis, asthma, osteoarthritis, postiasis, rhinitis, autoimmunity, diabetes, cancers and reproductive
                                                                           Human; mouse; protein kinase; antiarthritic; antisclerotic; osteopathic; immunosuppressive; cardiant; renal; antiinflammatory; antiasthmatic; dermatological; antidabetic; antiinfertility; gene therapy; vaccine; immune disorder; cardiovascular disease; neurodegenerative disease; cancer; autoimmune disorder; stroke; inflammatory bowel disease; inflammatory pelvic disease; multiple sclerosis; psoriasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sudersanam S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neurodegenerative diseases and/or cancers.
                                           Novel protein kinase, SEQ ID NO: 170.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Whyte D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 10; Fig 1; 310pp; English.
                                                                                                                                                                                                                                                                                                                                                      26-MAY-2000; 2000WO-US014842.
                                                                                                                                                                                                                                                                                                                                                                                               28-MAY-1999; 99US-0136503P
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plowman GD, Martinez R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-032161/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                      (SUGE-) SUGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAF44670
                                                                                                                                                                                                                                                                    WO200073469-A2
                                                                                                                                                                                                                                Tus musculus
  27-MAR-2001
                                                                                                                                                                                                                                                                                                             07-DEC-2000
```

```
New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating expression of MARK3 or for treating cancer or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouse; antisense gene therapy; MARK3; MAPRO microtubule affinity-regulating kinase 3; ca Alzheimer's disease; neurodegenerative disorde; hyperproliferative disorder; cytostatic.
                                   240 FESFQEDQMKRKARSEGRSRRRQQNQLLPL 269
286 FDSFQEAQIKRKARNEGRNRRRQ--QVLPL
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouse MARK3-associated protein #12
                                                                                                                                                                                                                                     ADI29250 standard; protein; 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dobie KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DT, Freier SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004-052188/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-052188/
N-PSDB; ADI29368.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 296 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      specification
                                                                                                                                                                                                                                                                                                                                                                           22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ward
                                                                                                                                                              RESULT 8
AD129250
AD129250
AD129250
DT 22-A
XX
DE MOUS
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW MAD2W
KW
ð
```

cancer;

```
The invention relates to a compound comprising a sequence comprising 8-80 base pairs (bp) targeted to a nucleic acid encoding MARK3 (MAP/microtubule affinity-regularing kinase 3), that specifically hybridises with the nucleic acid encoding MARK3 and inhibits expression of MARK3, i.e. is an antisense oligonuclectide (AO). Also included are a composition comprising the compound and a carrier or diluent, inhibiting the expression of MARK3 in cells or tissues, treating an animal having or suspected of having a disease or condition associated with MARK3 and secreting for an antisense compound. The antisense oligonuclectide is useful for preparing a composition for treating hyperproliferative disorder, particularly cancer and neurodegenerative diseases e.g. Alzheimer's disease. The present sequence is a MARK3 associated protein included in the figures but not mentioned anywhere else in the
Disclosure; SEQ ID NO 170; 233pp; English.
```

```
7
                                                                      46 KIALREIRMLKQLKHPNLVNLIEVFRRKRKWHLVFEYCDHTLLNELERNPNGVADGVIKS 105
                                                                                                                                              106 VLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRW 165
                                                                                                                                                                 59
                                                                                               1 KIALREIRMLK-LKHPNLVNLIEVFRRKRKAMHLVFEYCDHTLLNELERNPNGVSDGVIKS
                                        Gaps
                                        3;
78.0%; Score 1296.5; DB 8; Length 296; 90.0%; Pred. No. 1.7e-129; ive 19; Mismatches 5; Indels 3;
                                     Indels
                                     Conservative
               Local Similarity
les 243; Conserv
 Query Match
                   Best Loca
Matches
```

q ò 71.5%; Score 1188.5; DB 5; Length 358;

Sequence 358 AA;

Query Match

```
166 YRAPELLVGDTQYGSSYDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQ 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to an isolated polynucleotide (I) comprising one of administering to a manmalian subject a composition comprising definities the relation subject a composition comprising the protein (II) encoded by (I) (ABP62809-ABP63053) or an antibody (III) to (II).

(I), (II) and (III) are useful for diagnostic evaluation of disorders.

(I) is useful for gene therapy of diseases and (II) can be used for therapeutic treatment. Diseases that may be treated include wound healing and tissue repair, burns, central nervous system disorders (e.g. Alzheimer's, Parkinson's, Huntington's and amylotrophic lateral sclerosis, immune deficiencies, cancer, autoimmune disorders, multiple sclerosis, diabetes and allergies. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                             Human, vulnerary, dermatological, neuroprotective, nootropic, cancer, antiparkinsonian, immunostimulant, cytostatic, immunosuppressive, antialiabetic, antiallergic, gene therapy, wound healing; tissue repair, burn, central nervous system disorder, Alzheimer's disease; Parkinson's disease; Huntington's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polynucleotide and polypeptides, useful for treatment and diagnosis of Alzheimer's, Parkinson's, Huntington's, amylotrophic lateral sclerosis, immune deficiencies, cancer, autoimmune disorders, multiple sclerosis, diabetes and allergies.
                                                                     SIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSY
                                                                                               SIFRSNOFFRGISIPEPEDMETLEEKFSNVQPVALSFMKGCLKMNPDERLTCAQLLDSAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 20; SEQ ID NO 391; 284pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     autoimmune disorder; multiple sclerosis; diabetes; allergy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ren F, Zhai
Wehrman T;
                                                                                                                                                               FDSFQEAQIKRKARNEGRNRRRQ--QVLPL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Asundi V, Zhou P, Xue AJ,
Wang D, Liu C, Drmanac RT,
                                                                                                                                                                                                                                                                          Ą
                                                                                                                                                                                                                                                                                                                                                                             Human polypeptide SEQ ID NO 391.
                                                                                                                                                                                                                                                                      ABP62954 standard; protein; 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-SEP-2000; 2000US-00654935.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-AUG-2001; 2001WO-US027093
                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-583321/62.
N-PSDB; ABQ93433.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200218424-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-MAR-2002.
                                                                                                                                                                                                                                                                                                                                           14-OCT-2002
                                                                                                                                                                                                                                                                                                         ABP62954;
                                                                                                                                              286
                                                                                                                                                                              240
                                                                       226
                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang YT,
Zhao QA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YT,
                                                                                                                                                                                                                                                     ABP6295
                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                      ò
                                                                                                   임
                                                                                                                                          ð
```

Fri Apr

```
27-MAR-2001
                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                          61
                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                             62
                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                         AAB65642;
                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                     RESULT 11
                                                                                                                                                                                                                                                                                                                                                               AAB6564
    88888888888
                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes the use of a cyclin-dependent kinase like I (CDKL1) polypeptide or nucleic acid for modulating branching morphogenesis in a mammalian cell or for diagnosing a disease in a patient. Also described: (1) identifying a candidate branching morphogenesis modulating agent; (2) modulating branching morphogenesis in
                                                                                                                                             239
                                                                    PNLVNLIEVFRRKRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                             NCIHRDIKPENILITKOGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                  299
                                                                                                                                                                                           9
                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Use of cyclin-dependent kinase like 1 polypeptides or nucleic acids for modulating branching morphogenesis in a mammalian cell or for diagnosing a disease e.g. angiogenic, apoptotic or proliferation disorder in a
                                                                                                                                                                                                                                                                                                                                                           human; cyclin-dependent kinase like 1; CDKL1; branching morphogenesis; branching morphogenesis modulator; angiogenic disorder; apoptotic disorder; proliferation disorder; chromosome 14.
                                         MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                            SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                  PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSOLLESSYFDSFOEAOIKRKAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AM;
                                                                                                                                                                                                                                                                                                                                           Human cyclin-dependent kinase like 1 (CDKL1) protein SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Koblizek TI;
Trowe T, Vogel
8e-118;
----- 46; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Habeck HA, Kob
Stott GM, Trow
Jin Y, Hai B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HA,
   Pred. No. 8e-7
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example; SEQ ID NO 4; 52pp; English.
                                                                                                                                                                                                                                                                                      Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plowman GD, Karim FD, Swimmer C,
Schulte-Merker S, Langheinrich U,
Odenthal JH, Scheel JK, Will TT,
                                                                                                                                                                                                                                                                                     ADO01538 standard; protein; 358
           42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-OCT-2002; 2002US-0420554P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-OCT-2003; 2003WO-US033483
 70.5%;
                                                                                                                                                                                                                                                                                                                          (first entry)
            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EXEL-) EXELIXIS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-365563/34.
N-PSDB; ADO01535.
   Local Similarity
                                                                                                                                                                                                                                  |:
NK 303
                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004038372-A2.
                                                                                                                                                                                                                     NE 301
                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                          29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                        06-MAY-2004
                                                                    61
                                                                                                                                             180
                                                                                                                                                                                                  242
                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                        ADO01538;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patient
                                                                                                                                                                                                                                                                            ADO01538
                                                                                                                                                                                                                                                                                     g
                                                                                                                     셤
                                                                                                                                                             셤
                               8
                                           셤
                                                                  ઠે
                                                                                                 જે
                                                                                                                                            Š
                                                                                                                                                                                8
                                                                                                                                                                                              셤
                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                     g
```

```
ä
a mammalian cell comprising contacting the cell with an agent that specifically binds a CDKL1 polypeptide or nucleic acid; and (3) a method for diagnosing a disease in a patient. The CDKL1 polypeptide or nucleic acid is useful for modulating branching morphogenesis in a mammalian cell. It is also useful for diagnosing a disease, e.g. angiogenic, apoptotic or proliferation disorder in a patient. The present sequence represents human CDKL1, which is used in the exemplification of the present invention. The human CDKL1 gene is located on chromosome 14, more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleic acids encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 PPVDVWAIGCVFAELLSGVPLWPGKSDVDQLYLIRKTLGDLIPRHQQVFSTNQYFSGVKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human, mouse, protein kinase, antiarthritic, antisclerotic, osteopathi immunosuppressive, cardiant, renal; antiinflammatory, antiasthmatic, dermatological, antidiabetic, antiinfertility, gene therapy, vaccine, immune disorder, cardiovasculs (sease, neurodegenerative disease; cancer, autoimmune disorder; stroke, inflammatory bowel disease, inflammatory pelvic disease, inflammatory powel disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                           Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                        DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                          41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                     71.2%; Score 1183.5; DB 8
71.8%; Pred. No. 2.8e-117;
iive 41; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sudersanam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel protein kinase, SEQ ID NO: 169.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB65642 standard; protein; 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Whyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-MAY-2000; 2000WO-US014842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 71.8
Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plowman GD, Martinez R,
                                                                                                                                                                                                                                                         specifically to 14q22.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-032161/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUGE-) SUGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAF44669.
                                                                                                                                                                                                                                                                                                                  Sequence 358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200073469-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
```

```
The present sequence is a novel protein kinase. The novel protein kinases and the nucleic acids that encode them may be used in the treatment and diagnosis of diseases associated with inappropriate kinase expression such as immune-related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers. The nucleic acids and neurodegenerative diseases and/or cancers. The nucleic acids and assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Anti-kinase antibodies and kinase antagonists may also be used to down regulate kinase antibodies cand kinase antagonists may also be used to down regulate kinase activity include rheumatoid arthritis, atherosclerosis, autoimmune disorders, camplications of organ transplantation, myocardial infarction, immune disorders, cardiomyopathies, strokes, renal failure, oxidativestress related disorders, chronic inflammatory pelvic disease, multiple sclerosis, asthma, osteoarthritis, disparents in thinitis, autoimmunity, diabetes, cancers and reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96 NGVADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGD 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TLGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NGVADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 AYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156 AYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLLIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TLGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1149; DB 4; Length 247;
Pred. No. 7.7e-114;
1; Mismatches 0; Indels 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ--QVLPL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human, antisense gene therapy, MARK3;
MAP/microtubule affinity-regulating kinase 3; c
Alzheimer's disease; neurodegenerative disorde;
neurodegenerative diseases and/or cancers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hyperproliferative disorder; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human MARK3-associated protein #37.
                                   Claim 10; Fig 1; 310pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADI29249 standard; protein; 247
                                                                                                                                                                                                                                                                                                                                                                                                                            69.1%;
98.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 98.6
Matches 217; Conservative
                                                                                                                                                                                                                                                                                                                                                                                          Sequence 247 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-APR-2004
                                                                                                                                                                                                                                                                                                                                                     disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADI29249;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

9

120

275

```
The invention relates to a compound comprising a sequence comprising 8-80 base pairs (bp) targeted to a nucleic acid encoding MARK3 (MAP/Microtubule affinity-regulating kinase 3), that specifically hybridises with the nucleic acid encoding MARK3 and inhibits expression of MARK3, i.e. is an antisense oligonucleotide (AO). Also included are a composition comprising the compound and a carrier or diluent, inhibiting the expression of MARK3 in cells or tissues, treating an animal having or suspected of having a disease or condition associated with MARK3 and screening for an antisense compound. The antisense oligonucleotide is useful for preparing a composition for treating hyperproliferative disorder, particularly cancer and neurodegenerative diseases e.g. Alzheimer's disease. The present sequence is a MARK3 associated protein included in the figures but not mentioned anywhere else in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 AYTDYVATRWYRAPELLVGDIQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIR 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein kinase; enzyme; cytostatic; osteopathic; hepatotropic; immunosuppressive; antiathritic; dermatological; immunosuppressive; antiathritic; dermatological; ophthalmological; antiallergic; antiasthmatic; antiathercosclerotic; ophthalmological; antiallergic; antiasthmatic; antiathercosclerotic; hypotensive; vasotropic; antiarrhythmic; virucide; anorectic; metabolic; immunomodulator; analgesic; cellular proliferative disorder; cancer; acute lymphoblastic leukaemia; Hodgkin's disease; ancer inflammatory; diabetes mellitus; osteoarthritis; asthma; cardiovascular disorder; osteoarthritis; asthma; endothelial cell disorder; psoriasis.
                                                                               New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating expression of MARK3 or for treating cancer or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96 NGVADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              216 TLGKLIPRHOSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NGVADGVIKSVLWQTLQALNFCHINCIHRDIKPENILITKQGIIKICDFGFAQILIPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          156 AYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 TCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQNQLLPL 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               276 TCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ--QVLPL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1149; DB 8;
Pred. No. 7.7e-114;
1; Mismatches 0;
                                                                                                                                                                   Disclosure; SEQ ID NO 169; 233pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human kinase 14257 amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAG78547 standard; protein; 228 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 98.6%;
Matches 217; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                  WPI; 2004-052188/05.
N-PSDB; ADI29367.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 247 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAG78547;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAG78547
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

Location/Qualifiers

Freier SM, Dobie KW;

Ward DT,

(ISIS-) ISIS PHARM INC

17-JUN-2002; 2002US-00174319 17-JUN-2002; 2002US-00174319

US2003232771-A1 Homo sapiens

18-DEC-2003

σ

```
The invention relates to an isolated 14257 polypeptide and nucleic acid encoding it. The 14257 protein is a protein kinase that acts as a modulating agent in regularing a variety of cellular processes, including cell proliferation, differentiation, growth and division. The activity of the protein of the invention may be described as; cytostatic; osteopathic; hepatotropic; antidiabetic; neuroprotective; antiarthritic; hepatotropic; antidiabetic; natiallergic; antiarthritic; antiparthritic; ophthalmological; antiallergic; antiarthritic; antiatherosclerotic; hypotensive; vasotropic; antiarthritic; cancier, immunomodulator and analgesic. The protein of the invention may act as a novel diagnostic target or therapeutic agent controlling certain disorders, for example kinase-associated or other controlling certain disorders. These may include cellular proliferative disorders such as cancers e.g. acute lymphoblastic leukemia or Hodgkin's disease. Other disorders include bone metabolism disorders such as
                                                                                                                                                                                                                                                                          /note= "kinase transferase protein serine/threonine-
protein ATP-binding II phosphorylation casein alpha chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      osteoporosis, disorders of the immune system, e.g. inflammatory, diabetes mellitus, osteoarthritis and asthma. Proteins of the invention any also be of use as therapeutic agents in cardiovascular disorders such as hypertension and coronary artery disease, and some endothelial cell disorders, including psoriasis. The current sequence represents a human kinase 14257 amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New 14257 polypeptides (protein kinases), useful as diagnostic target and therapeutic agents for controlling cellular proliferative and/or differentiative disorder, bone disorders, immune disorders and
                                                                                                                                                                                                          /note= "serine/threonine protein kinase active-site
signal site"
                                                                                                                                                                                                                                                                                                                                                                                                                                  205. .208 |
/note= "casein kinase II phosphorylation site"
                                                                                                                                                   "casein kinase II phosphorylation site
                                                                                                                                                                                                                                                                                                                                           note= "casein kinase II phosphorylation site
                                                "tyrosine kinase phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                  'note= "tyrosine kinase phosphorylation site"
                "eukaryotic protein kinase domain"
                                                                                                                     "N-myristoylation site"
                                                                                                                                                                    97. .102
/note= "N-myristoylation site"
                                                                                                                                                                                                                                                                                                                                                                                   note= "N-myristoylation site"
                                                                /3. .26
/note= "N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1c; Fig 1A; 98pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-APR-2001; 2001WO-US012188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-APR-2000; 2000US-0196910P
                                                                                                                                                                                                      .134
                                                                                                                                                                                                                                                                                                                                                               .193
                                                                                                                                                                                                                                                                                                                                                                                                  .211
                                                                                                                                                                                                                                                                                                                               180. .183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cardiovascular disorders.
                                                                                                                                     .41
                                                                                                 .32
                              ). .15
/note= '
 4. .218
/note=
                                                                                                                     note=
                                                                                                                                                       note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kapeller-Libermann R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-034355/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB, AAI64248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200179488-A2
                                Modified-site
                                                                Modified-site
                                                                                                                                   Modified-site
                                                                                                                                                                    Modified-site
                                                                                                                                                                                                      Modified-site
                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                                                                                                                               Modified-site
                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-OCT-2001
 Domain
                                                                                                                                                                                                                                                          Domain
```

Sequence 228 AA;

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.8
                                                                                                                                PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                   PNLVNLIEVFRRKRKMHLVFEYCDHALLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                              NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher exaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072). The sequence data for this parent did not form part of the printed specification, but was obtained in electronic format directly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signaling and cell-cell
                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                              1 MGKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPIVKKIALREIRMLKQLKH
                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila; developmental biology; cell signalling; insecticide;
                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61.8%; Score 1027.5; DB 4; Length 392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; SEQ ID NO 16146; 21pp + Sequence Listing; English.
 Length 228;
                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster polypeptide SEQ ID NO 16146.
                                                                                                                                                                                                                                                               SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG 218
                                                                                                                                                                                                                                                                                    181 SVDIWAIGCVFAELLTGOPLWPGKSDVDOLYLIRTLG 218
Score 1140; DB 5;
Pred. No. 6.3e-113;
                                2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                 ABB63118 standard; protein; 392 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2001; 2001WO-US009231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-MAR-2000; 2000US-0191637P
11-JUL-2000; 2000US-00614150
 68.6%;
98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                 Best Local Similarity 98.2
Matches 214; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-656860/75
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; ABL07221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 392 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-SEP-2001.
                                                                                                                                61
                                                                                                                                                                                                121
                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                 ABB63118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                RESULT 14
                                                                                                                                                                                                                                                                                                                                                               ABB63118
                                                                                            g
                                                                                                                                                                                                                                                                                       음
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                          셤
                                                                                                                                                                                              ò
                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                               8
```

```
2
                                                                            PNLVNLIEVFRKKRKRKHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                      121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                    SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                               EPEDMETLEEKF---SDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSF--QEAQIK 295
                                                                                                                                                                                                                          241 VPPTLEPLEDKMPAKSQQNPLTIDFLKKKCLDKDPTKRWSCEKLTKHSYFDDYIAKQRELE 300
                                      9
                                                         9
                                MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                              Gaps
                2;
               Indels
    1.5e-100;
thes 61;
             65; Mismatches
   Pred. No.
                                                                                                                                                                                                                                                        RKARNEGRNRRROOV 310
                                                                                                                                                                                                                                                                      | | |:||:
HVNSLEAANLRQQQL 315
   58.48;
           Matches 184; Conservative
Best Local Similarity
                                                                            61
                                                                                                                                            121
                                                                                                 61
                                                                                                                                                                   181
                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                        962
                                 ò
                                                 요
                                                                          ò
                                                                                             셤
                                                                                                                      ò
                                                                                                                                          g
                                                                                                                                                                 ò
                                                                                                                                                                                      엄
                                                                                                                                                                                                                                d
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                       ð
```

Ą. Rabbit KKIAMRE kinase SEQ ID NO:4. AAY90724 standard; protein; 566 (first entry) 15-AUG-2000 AAY90724; RESULT 15 AAY90724 

Rabbit; KKIAMRE kinase; learning-induced kinase; learning; memory; cdc2-related kinase; brain; gene therapy; genetic disorder; detection; identification.

Oryctolagus cuniculus.

WO200020567-A2.

13-APR-2000

99WO-US023010 01-OCT-1999;

(UYSC-) UNIV SOUTHERN CALIFORNIA.

98US-0102906P

02-OCT-1998;

Thompson RF,

Sun W; Gomi H,

WPI; 2000-328932/28. N-PSDB; AAA29745 Novel learning induced kinase polynuclectides and polypeptides, useful for the analysis of learning and memory, and for gene therapy.

Claim 1; Fig 4; 64pp; English.

The present sequence represents a learning-induced kinase, designated KKIAMRE kinase, which is isolated from rabbit brain tissue. KKIAMRE kinase is a cdc2-related kinase. The KKIAMRE kinase polynucleotides can be used to express recombinant protein for analysis, characterisation or therapeutic use, as markers for tissues in which the protein is preferentially expressed, as molecular weight markers on Southern gels, as chromosome markers or tags, to compare endogenous DNA sequences in patients to identify potential genetic disorders, as probes to hybridise and discover novel related sequences, as a source of PCR primers, and as

```
ņ
                                                                                                                                                                                                                                       PNLVNLIEVFRRKRKRMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                     9
an antigen to induce anti-DNA antibodies. The polypeptides can be used assay to discover biological activity, to raise antibodies, as tissue markers, and to isolate correlative receptors or ligands. The polynucleotides may also be used for gene therapy for the treatment of disorders which are mediated by KKIAMRE kinase
                                                                                                                                                                                                                                                        1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                  121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                            PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF-----QEA
                                                                                                                                                     Gaps
                                                                                                                                                     15;
                                                                                                                         Length 566;
                                                                                                                                                   Indels
                                                                                                                    58.2%; Score 967.5; DB 3; 54.6%; Pred. No. 6.9e-94; ive 67; Mismatches 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    completed: April 22, 2005, 06:47:32
He : 88.5529 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 OMKVOKDARNISLSKKSONRKKEK 324
                                                                                                                Query Match
Best Local Similarity 54.6'
Matches 177; Conservative
                                                                                       Sequence 566 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search
Job tim
   888888
                                                                                                                                                                              ⋩
                                                                                                                                                                                                        g
                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
Sequence 12, Appl
Sequence 6, Appli
Sequence 10, Appli
Sequence 4, Appli
Sequence 7552, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11, Appl
4, Appli
4, Appli
10, Appl
10, Appl
2, Appli
1236, Ap
6052, Ap
1077, Appli
25, Appli
25, Appli
26, Appli
27, Appli
28, Appli
27, Appli
28, Appli
28, Appli
27, Appli
28, Appli
28, Appli
27, Appli
28, Appli
28, Appli
29, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27, Appli
27
                                                                                                                                                                                                                                                 April 22, 2005, 04:37:19 ; Search time 30.929 Seconds (without alignments) 760.272 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-766-691-12
1662
1 MBKYEKLAKTGEGSYGVVFK.....RARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Issued Patents AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-671-050-0

US-09-671-050-0

US-09-671-050-0

US-09-949-016-7552

US-09-411-628-11

US-09-411-678-4

US-09-411-678-4

US-09-411-678-4

US-09-949-016-795-4

US-09-949-016-795-4

US-09-671-050-2

US-09-671-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8

US-09-949-016-050-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        513545 segs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sed
sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Result
No.
```

Sequence Sequence Sequence Sequence

Appl Appl S, Ap S, Ap Appl Appl Appl Appl Appl Appl Appl A			0,	09	120	180	240	300
26, Ap 29, Ap 1006, 1006			Gaps	MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 	PNLVNLIEVFRRKRAMHLVFEYCDHTLLMELERNPNGVADGVIKSVLWQTLQALNFCHIH 	2YGS       2YGS	ISIP 	EPEDMETLEEKFSDVHPVALNFMKGCLKANPDDRLTGSQLLESSYFDSFQEAQIKRKARN 
			Ö	MLK MLK	LNFC LNFC	GDT( 	FHG.	<u> </u>
Sequence Seq			5;	EIR EIR	<u>8</u> —8		NGF NGF	EAO
		and	h 31 8	ALR.	\$ _ \$	SAPE	FKS	SFQ 
		ro.	Length Indels	<u> </u>	KSVI	RWY3	HOS1	SYFI
		ceins Same		74 Q	GVI GVI	VAT 	I PR	LES LES
73		the Si	4; 166; 0;	ESEL 	3VAL	5-15 5-15	2 2 2 2 2 2 2 3	10 
26 68020 68020 68020 7200 7200 7300 7300 7300 7300 7300 7		o u	DB .	KF-Z	NAN HAN	6 – 6 6 – 6 6 – 6	IRT IRT	7. T. T. T. T. T. T. T. T. T. T. T. T. T.
00000000000000000000000000000000000000	STS	an Kinase Encoding ,050 11		4/4/K	SLER SLER		7 7 7 7 7 7	
9-093-522-26 9-457-040B-29 9-538-092-1006 9-949-016-8025 8-176-620A-16 8-461-985-16 8-461-985-16 8-874-347-23 8-874-347-24 9-093-522-24 9-093-522-24 9-093-522-24 9-093-522-24 9-093-522-24 9-093-522-24 9-093-522-10 1-28-874-347-10 8-874-347-10 8-874-347-10 8-874-347-10 9-093-522-10 1-28-874-347-10 9-093-522-10 9-093-522-10 9-093-523-10 9-093-523-10 9-093-523-10	NME	55 7	ore 1662; ed. No. 1 Mismatche	8-8 8-8		FAO-FAO	8-8 8-8	Z-Z
00000000000000000000000000000000000000	ALIGNMENT	50 Jr. Human des En /671,01 56,511	Score Pred.	KTS		5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	SKSD SKSD	AKGC
\$0.000		ander Jr. ander Jr. an 6616el Hum 6610ctides J AUS/09/671 06-11 06-11 88 G0/156,5:	ö	KCR HCR	FEY FEY FEY	X=X	1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 —	L N H
まるみはこのなるなるなみなるのことなる。		த நிருவிற்ற இ	**	3VVF	第二章	NCIHRDIKPENILITKQGIIKICDFGFAQILIFGDAYTDYVATRWYRAPELLVGDTQYG 	VDIWAIGCVPAELLIGQPLWPGKSDVDQLYLIIRTIGKLIPRHQSIFKSNGFFHGI 	HPVA 
00000000000000000000000000000000000000		un US/09. ggory Alexan Alexan Alexan (), Brian (), Brian (), C7166 (), G7166 (), G7167	100 100 ive	GSY 	X — X		13 — 13 13 — 13 14 — 13	SDVI 
		ation  Greg Greg C. 7 C. 7 Vic	rvat	KTGE	VFRR    VFRR	PENI PENI PENI	CVEA	BEKE BEKE
<u>и ч ч ч о о ю ю ю ю ю м 4 4 4 и и и</u>		icat. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	rit			9—9 1—1	AIG MIG	ETT.
		SULT 1. Sequence 12, Application US/0 Sequence 12, Application US/0 Sequence 12, Application US/0 Sequence 12, Application US/0 SENERAL INFORMATION: APPLICANT: Donoho, Gregory APPLICANT: Turne, C. Alexa APPLICANT: Ambrowicz, Bria APPLICANT: Zambrowicz, Bria APPLICANT: Zambrowicz, Bria APPLICANT: Ambrowicz, Bria APPLICANT: Ambrowicz, Bria APPLICANT: Expedich, Glenn APPLICANT: Expedich, Glenn APPLICANT: Expedich, Glenn APPLICANT: Expedich, Glenn APPLICANT: Expedich, Glenn APPLICANT: Briads, 2001-0 TITLE OF INVENTION: NO. 6716 TITLE OF INVENTION: NO. 6716 TITLE OF INVENTION: NO. 6716 TITLE OF INVENTION NUMBER: 2001-0 PRIOR APPLICATION NUMBER: 1999-09-1 NUMBER OF SEQ ID NOS: 13 SEQ ID NO 12 LENGTH: 315 TYPE: PRI TYPE: PRICE WINGOW ORGANISM: homo sapiens	/ Match Local Similarity nes 315; Conservat	EKYE EKYE	7 7 7 7 7	は二日	8—8 X—8	PEDN 
		22, Ag 12	h Sir 15;	¥—¥ ⊣ ⊣	н н		v— v	
0		T 1671-050. uence 12. ent No. ERAL INF. PLICANT: PLICANTT: PLICANTT: PLICANTT: PLICANTT: PLICANTT: PLICANTT: PLICANTT	Match Local es 31		o o	12	18	241
00000000000000000000000000000000000000		0 0 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Query Ma Best Loc Matches					
(((((((((((((((((((((((((((((((((((((((		CO + CO De CO	Oue Bes Mat	ه ح	۵ م	۵ د	م ح	۵ خ
		G S C C C C C C C C C C C C C C C C C C		중 A	& B	8 8	\$ B	å å

```
PILE REFERENCE: LEX-0046-USA
CURRENT PEDILOGICAL NO WORBER: US/09/671,050
CURRENT FILING DATE: 2001-06-11
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PASESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/09671050 Patent No. 6716616 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97.0%;
90.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.6
Matches 310; Conservative
                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 90.8
Matches 315; Conservative
                                                                                                                                                                                                                                  TYPE: PRT
CRGANISM: homo sapiens
US-09-671-050-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: homo sapiens
US-09-671-050-4
                                                                                                                                                                                    SEQ ID NO 10
LENGTH: 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-671-050-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 SVDIWAIGCVFAELLITGOPLWPGKSDVDQLYLLIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PNLVNLIEVFRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 EPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
0
                                                                                                                                                                                                                                                          APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: New Part General Archard Samble, Michael Barbander, Sands, Archard Titze Or Invention: Polymucleotides Encoding the Same TITLE OF INVENTION: Polymucleotides Encoding the Same TITLE OF INVENTION: Polymucleotides Encoding the Same TITLE OF INVENTION: NOWBER: US/09/671,050
CURRENT FILING DATE: 2001-06-11
FRIOR APPLICATION NUMBER: US 60/156,511
FRIOR APPLICATION NUMBER: US 60/156,511
FRIOR APPLICATION NUMBER: US 60/156,511
FRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6
LENGTH: 324
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.6%; Score 1638; DB 4; Length 324; 100.0%; Pred. No. 3.8e-164; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Friedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Of 716616el Human Kinase Proteins and TITLE OF INVENTION: Polynucleotides Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-671-050-10; Sequence 10, Application US/09671050; Sequence 10, Application US/09671050; GENERAL INFORMATION:
                                                                                                                                                         : 09-671-050-6
Sequence 6, Application US/09671050
Patent No. 6716616
                                                   EGRNRRROOVLPLKS 315
        301 EGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 310; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EGRNRRRÖGV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: homo sapiens
US-09-671-050-6
                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
```

```
61 PNLVNLIEVFRRKRKRKHLVFEYCDHTLLNELBRNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFWKGCLK 300
                                                                                                                                                                                                                                                                                              61 PNLVNLIEVFRRKRKRKMILVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDEVVKKTALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218 -----GKLIPRHQSIFKSNGFFHGISIPBEPEDMETLEEKFSDVHPVALNFMKGCLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                         121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                               32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Donnho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Huner, C. Alexander Jr.
APPLICANT: Priedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: PINUENTION: No. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: Polymucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 2001-06-11
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 347
       Length 347;
                                                                           Indels
98.4%; Score 1636; DB 4;
90.8%; Pred. No. 6.9e-164;
live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1612; DB 4;
Pred. No. 2.4e-161;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 13
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 4
```

셤 ઠે g ò 8 ઠે 유 ò

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62 PNLVNJLEVPRRKRRIJHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKTALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71.2%; Score 1183.5; DB 4; Length 358; 71.8%; Pred. No. 3.6e-116; tive 41; Mismatches 41; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11, Application US/10174794
; Patent No. 664086
; GENERAL INPORMATION:
; APPLICANT: University of Southern California
; TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
; TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
; FILE REFERENCE: 13761-707
; CURRENT APPLICATION NUMBER: US/10/174,794
; CURRENT FILING DATE: 1999-10-01
; PRIOR PILING DATE: 1999-10-01
; PRIOR APPLICATION NUMBER: US 60/102,906
; NUMBER OF SEQ ID NOS: 16
; SOFFWARE: FRSENCE for Windows Version 4.0
                                                                                                                                                                                                                                          TITLE OF INVERTION : CDNA, GENOMIC, AND PREDICTED PROTEIN TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES CURRENT APPLICATION NUMBER: US/09/411,628 CURRENT FILING DATE: 1999-10-01 EARLIER APPLICATION NUMBER: US 60/102,906 EARLIER PILING DATE: 1998-10-02 NUMBER OF SEQ ID NOS: 16 SOFTWARE: FRASESQ for Windows Version 4.0
                                                                                                                                                                        Sequence 11, Application US/09411628
Patent No. 6428994
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 358
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                 |:
311 NK 312
     300 NE 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-174-794-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-411-628-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 11
LENGTH: 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CLO01307
CURRENT PILING DATE: 2000-00-04-14
CURRENT FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR PELLOR DATE: 2000-10-03
PRIOR PELLOR DATE: 2000-10-03
PRIOR PELLOR DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOUTH OF SEQ ID NOS: 207012
SOUTH OF SEQ ID NOS: 207012
SOUTH OF THE SECON OF SEQ ID NOS: 207012
SEQ ID NO 7552
                                                                                                                                                                                                                                                                                                     239
                                                                                                   61 PNLVNLIEVFRRRRRRAMLVFEYCOHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                    121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                    241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71 PNLVNLLEVFRRKRRLHLVPEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                           NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKAR
                                                                                                                                                                                                                                                                                                                                                                          -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4; Length 367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        269 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                         181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71.5%; Score 1188.5; DB 4.70.5%; Pred. No. 1.1e-116; iive 42; Mismatches 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7552, Application US/09949016
Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 70.5'
Matches 213; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Human
US-09-949-016-7552
                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251
```

g

ð 셤 δ 원 8

셤 δ

```
301 QMKVQKDARNISLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-949-016-7954
                                                                                                                                                                                                                                                                                                                        SEQ ID NO 4
LENGTH: 566
                                               RESULT 9
US-10-174-794-4
                                                                                                                                                                                                                                                                                                                                                                                          US-10-174-794-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                            239
                                                                                                                                                                                                                                                                                                          241
                                                                                                                                           61 PNLVNLIEVFRRKRKMHLVFBYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 ENLVNLIEVCKKKKRRWYLVPEFVDHTILDDLELFPNGLDDQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 PNLVNLLEVFRRKRRLHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                               9
                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                               1 MEKYENLGLVGEGSYGMVMKCRNKDSGRIVALKKFLESDDDKNVKKJAMREIKLLKOLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                          SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PNLVNLIEVFRRKRKMHLVFBYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Gaps
                                                                                                                                                                                                                                                                                                                                                            240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 293
                                               1;
               DB 4; Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 58.2%; Score 967.5; DB 4; Length 566; Best Local Similarity 54.6%; Pred. No. 4.2e-93; Matches 177; Conservative 67; Mismatches 65; Indels 15
                                             41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:

APPLICANT: University of Southern California
APPLICANT: University of Southern California
TITLE OF INVENTION: EDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
CURRENT APPLICATION NUMBER: US/09/411,628
CURRENT FILING DATE: 1999-10-01
EARLIER APPLICATION NUMBER: US 60/102,906
BARLIER FILING DATE: 1998-10-02
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FASTSEQ for Windows Version 4.0
                              ; Pred. No. 3.6e-116; 41; Mismatches 41;
             71.2%; Score 1183.5; 71.8%; Pred. No. 3.6e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/09411628
Patent No. 6428994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: PRT
; ORGANISM: Orcytolagus cuniculus
US-09-411-628-4
                           Best Local Similarity 71.89
Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 4
LENGTH: 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              293
               Query Match
                                                                                                                                           ò
                                                                                                                                                                    P
                                                                                                                                                                                                                                 셤
                                                                            ò
                                                                                                  Db
                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
; Sequence 7954, Application US/09949016
; Patent No. 6812339
; GENDERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-09-08
; PRIOR FILING DATE: 2000-09-08
; PRIOR FILING DATE: 2000-09-08
; PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 ENLVNLLEVCKKKKRWYLVFEFVDHTILDDLELFPNGLDDQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180 SSVDIWAIGCVFAELLITGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYENLGLVGEGSYGWVMKCRNKDSGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 KAVDVWAIGCLVTEMLMGEPLFPGDSDIDQLYLIMRCLGNLIPRHQELFYKNPVFAGVRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 566;
Sequence 4, Application US/10174794

Patent No. 6664086

GENERAL INFORMATION:
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REPERENCE: 137461-707
CURRENT APPLICATION NUMBER: US/10/174,794
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
SPRIOR FILING DATE: 1999-10-02
NUMBER OF SEQ ID NOS: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 58.2%; Score 967.5; DB 4 Best Local Similarity 54.6%; Pred. No. 4.2e-93; Matches 177; Conservative 67; Mismatches 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |:| : ||| : ||301 QMKVQKDARNISLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Orcytolagus cuniculus
```

```
US-10-174-794-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-671-050-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                           293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                             요
                                                                      8 8
                                                                                                                                      Š
                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                 243 PEIKEREPLERRYPKLSEVVIDLAKKCLHIDPDKRPFCAELLHHDFFQMDGFAERFSQEL 302
                                                                                                                                                                                                                                                               61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                    121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                       180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240 PEPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PNLVNLIEVPRRKRKNÆHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 MEKYENLGLVGEGSYGWVMKCRNKDTGRIVAIKKFLESDDDKWVKKIAMREIKLLKQLRH 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYENLGLVGEGSYGWVMKCRNKDTGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                           15;
                                                                                                                     56.6%; Score 941.5; DB 4; Length 475; 53.1%; Pred. No. 1.8e-90; ive 68; Mismatches 69; Indels 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 493;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/09/411,628
CURRENT FILING DATE: 1999-10-01
EARLIER APPLICATION NUMBER: US 60/102,906
EARLIER FILING DATE: 1998-10-02
NUMBER OF SEQ ID NOS: 16
SOPTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 56.6%; Score 941.5; DB 4 Best Local Similarity 53.1%; Pred. No. 1.9e-90; Matches 172; Conservative 68; Mismatches 69
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7954
LENGTH: 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |:| : ||| : ||303 QLKVQKDARNVSLSKKSQNRKKEK 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10, Application US/09411628
                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens US-09-411-628-10
                                                                                                                     Query Match
Best Local Similarity
Matches 172; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 6428994
GENERAL INFORMATION:
                                                ; TYPE: PRT
; ORGANISM: Human
US-09-949-016-7954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-411-628-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 493
TYPE: PRT
                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
```

```
241 PEIKEREPLERRYPKLSEVVIDLAKKCLHIDPDKRPPCAELLHHDFFQMDGFAERFSQEL 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PNLVNLIEVFRRKRKMHLVFBYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYENLGLVGEGSYGMVMKCRNKDTGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH 60
                                                                                                       PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                            Sequence 10. Application US/10174794

Sequence 10. 664086

GENERAL INFORMATION:
APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REPERENCE: 13761-707

CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-02

NUMBER OF SEQ ID NOS: 16

SOUTHARRE: FESCEEC for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.6%; Score 941.5; DB 4
53.1%; Pred. No. 1.9e-90;
iive 68; Mismatches 69
                                                                                                                                                                                                                                         |:| : ||| : ||301 QLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/09671050; Patent No. 6716616; GENERAL INFORMATION: APPLICANT: Donoho, Gregory APPLICANT: Turner C. Alexander Jr. APPLICANT: Nehls, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 53.13
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Homo sapiens
```

Friedrich, Glenn

```
236
                                   임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PNLVNLIEVFRRRRRAMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PNLVNLIEVFRRKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PNLVNLIEVFRKRRAMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Friedrich, Gleun
APPLICANT: Friedrich, Gleun
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 2001-06-11
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8

LENGTH: 198
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match

47.6%; Score 791; DB 4; Length 187;
Best Local Similarity 100.0%; Pred. No. 3.3e-75;
Matches 151; Conservative 0; Mismatches 0; Indels
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands Arthur T.
TITLE OF INVENTION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: NO. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT PELLORATION NUMBER: US/09/671,050
FRIOR APPLICATION NUMBER: US 60/156,511
PRIOR APPLICATION NUMBER: US 60/156,511
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match

47.6%; Score 791; DB 4; Length 198; Best Local Similarity 100.0%; Pred. No. 3.6e-75; Matches 151; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 NCIHRDIKPENILITKOGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 8, Application US/09671050
Patent No. 6716616
                                                                                                                                                                                                                                                                                                             TYPE: PRT
CAGANISM: homo sapiens
US-09-671-050-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-671-050-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-671-050-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
```

ò

ò 셤 ò 원 à

```
58 LKHPNIVRLLDVVHNERKLYLVFEFLSQDLKKYMDSTPGSELPLHLIKSYLFQLLQGVSF 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117 CHIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGD 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229 GVTQLPDYKGSFPKWTRKGLEEIVPNLEPEGRDLLMQLLQYDPSQRITAKTALAHPYFSS 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176 TQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGPFH
                                                                                                                                                                    Sequence 1236, Application US/09538092

Patent No. 675314

GENERAL INFORMATION:
APPLICANT: Giot, Loic
APPLICANT: Giot, Loic
TITLE OF INVENTION: Protein Complexes and Method of Using Same TITLE OF INVENTION: Protein Complexes and Method of Using Same FILE REFERENCE: 15966-542

CURRENT APPLICATION NUMBER: US/09/538,092

CURRENT FILING DATE: 2000-03-29

PRIOR APPLICATION NUMBER: 60/127,352

PRIOR APPLICATION NUMBER: 60/127,352

PRIOR FILING DATE: 2000-02-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKF---VESEDDPVVKKIALREIRMLKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58 LKHPNLVNLIEVFRRKRKRKHLVFEYCDHTLLNELERNPNG-VADGVIKSVLWQTLQALNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GIS-IPE----PE-DMETLEEKFSDVHPVALNFWKGCLKMNPDDRLICSQLLESSYFDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 35.0%; Score 581; DB 4; Length 305; Best Local Similarity 39.8%; Pred. No. 9.4e-53; Matches 123; Conservative 66; Mismatches 96; Indels ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; LOCATION: (0). _. (0)
_. OTHER INFORMATION: Polypeptide Accession Number Q00526
US-09-538-092-1236
NUMBER OF SEQ ID NOS: 1387
SOFTWARE: CuraPatSeqFormatter Version 0.9
SEQ ID NO 1236
LENGTH: 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: April 22, 2005, 06:52:57 Job time: 31.929 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  289 FQEAQIKRK 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 289 PEPSPAARO 297
                                                                                                                                               US-09-538-092-1236
  6
```

us-10-766-691-12.rapb

```
April 22, 2005, 06:50:50; Search time 780.363 Seconds (without alignments) 134.334 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MEKYEKLAKTGEGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Published Applications AA:*

| cgn2 6/ptodata/1/pubpaa/USO7 PUBCOMB.pep:*
2: /cgn2 6/ptodata/1/pubpaa/USO7 NEW PUB.pep:*
3: /cgn2 6/ptodata/1/pubpaa/USO6 NEW PUB.pep:*
4: /cgn2 6/ptodata/1/pubpaa/USO6 NEW PUB.pep:*
5: /cgn2 6/ptodata/1/pubpaa/USO6 NEW PUB.pep:*
6: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
7: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
8: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
9: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
11: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
11: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
12: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
13: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
14: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
15: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
16: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
17: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
18: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
18: /cgn2 6/ptodata/1/pubpaa/USO8 PUBCOMB.pep:*
19: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
19: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
10: /cgn2 6/ptodata/1/pubpaa/USO8 NEW PUB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1424015 seqs, 332791073 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                      OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-766-691-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                          Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Description	Seguence 12, Appl	Sequence 10, Appl	Sequence 6, Appli	Sequence 10, Appl	Sequence 4, Appli	Seguence 391, App	Sequence 97, Appl	Sequence 11, Appl	Sequence 2, Appli	Sequence 4, Appli	Sequence 10, Appl	Sequence 22, Appl	Sequence 108, App
ΩI	US-10-766-691-12	US-10-333-314-10	. US-10-766-691-6	US-10-766-691-10	US-10-766-691-4	US-10-363-616-391	US-10-664-421-97	US-10-174-794-11	US-09-834-496A-2	US-10-174-794-4	US-10-174-794-10	US-10-369-022-22	US-10-757-262-108
DB	17	15	17.	11	11	15	16	14	6	14	14	15	16
Query Match Length DB	315	342	324	347	356	358	338	358	228	995	493	493	493
& Query Match	100.0	98.6	98.6	98.4	97.0	71.5	71.4	71.2	68.6	58.2	56.6	9.95	9.95
Score	1662	1639	1638	1636	1612	1188.5	1186.5	1183.5	1140	967.5	941.5	941.5	941.5
Result No.	-	8	e	4	S	9	7	60	0	10	11	12	13

22, B 34, B 662, 1 11115, 1 1115, 1 114, 1 114, 1 1161, 1 31, 1	399, 1133, 1103, 111, 111, 112, 112, 114, 115,
US-10-766- US-10-766- US-10-250- US-10-250- US-10-394- US-10-171-1 US-10-174- US-10-174- US-10-174- US-10-174- US-10-174- US-10-394- US-10-664-	US-10-295-681-3 US-10-295-681-4 US-10-295-681-4 US-10-295-681-4 US-10-295-681-3 US-10-389-565-1 US-10-060-065-1 US-10-059-581-3 US-10-177-293-4 US-10-177-293-4 US-10-174-293-4 US-10-204-041-8
	424444444444
11 80 00 00 00 00 00 00 00 00 00 00 00 00 0	
444400000000000000000000	
791 784.5 712.5 712.5 881 581 570 570 570 569 567 567 567 567 567 567 567 567 567 567	561.5 561.5 561.5 561.5 556.5 556.5 556.5 556.5 556.5 556.5
4 2 3 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	

## ALIGNMENTS

```
| March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | March | Marc
```

ö

2

임

ò 유 ò g

ò B à a

```
61 PNLVNLIEVFRRKRYMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHTH 120
                                                                                                                                                          121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKIGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PNLVNLIEVFRRKRKAMLLVFEYCDHTLLANELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVDIWAIGCVFABLLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                             SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP
                                                                                                                                                                                                                                                                                                                                                   241 EPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN
                                                               PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                        SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIRTLGKLIPRHQSIFKSNGFFHGISIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKTALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PNLVNLIEVFRKRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Polynuclectides Encoding the Same FILE REFERENCE: LEX-0046-USA CURRENT APPLICATION NUMBER: US/10/766,691
CURRENT FILING DATE: 2004-01-28
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR PILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Donoho, Gregory
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Friedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
APPLICANT: Sands, Arthur T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.2e-130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98.6%; Score 1638; D
100.0%; Pred. No. 2.2
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EGRNRRRQQNQLLPL 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                   EGRNRRRQ--QVLPL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 310; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: homo sapiens
US-10-766-691-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-766-691-6
                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                  g
                                                                                                                                                          ઠે
                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
PNLVNLIEVFRRKRKKKKHGHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                       180
                                                                                                                                                       180
                                                                                                                                                                                                       240
                                                                                                                                                                                                                              EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                    61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                             121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                           181 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIRTLGKLIPRHQSIFKSNGFFHGISIP
                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKTALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: KHAN, Farrah A.; GURURAJAN, Rajagopal
APPLICANT: HAFALIA, April J.A.; CHWULA, Rajagopal
APPLICANT: HAFALIA, April J.A.; CHWULA, Narinder K.
APPLICANT: HAFALIA, April J.A.; CHWULA, Narinder K.
APPLICANT: GANDHI, Ameena R.; POLICKY, Jennifer L.
APPLICANT: BAUGHN, Mariah R.; TRIBOULEY, Cacherine M.
APPLICANT: THORNYON, Michael B.; BANDMAN, Olga
APPLICANT: BURFORD, Neil; LU, Yan
APPLICANT: BURFORD, Neil; LAL, Preeti G.
APPLICANT: BURFORD, Neil; LAL, Preeti G.
APPLICANT: GERENWALD, Sara R.; TRNG, Y TOM
APPLICANT: GREENWALD, Sara R.; TANG, Y TOM
APPLICANT: GREENWALD, SARA R.; TANG, Y TOM
APPLICANT: GREENWALD, SARA R.; TANG, Y TOM
APPLICANT: GREENWALD, SARA R.; TANG, Y TOM
APPLICANT: GIETZEN, Kimberly J.; YANG, Junming
APPLICANT: GIETZEN, Kimberly J.; YANG, Junming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 98.6%; Score 1639; DB 15; Best Local Similarity 99.0%; Pred. No. 1.9e-130; Matches 312; Conservative 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTLE OF INVENTION: HUMAN KINAES:
FILE REFERENCE: PT-0162 USN
CURRENT APPLICATION NUMBER: US/10/333,314
CURRENT APPLICATION NUMBER: US/10/339,314
CURRENT FILING DATE: 2003-01-15
PRIOR APPLICATION NUMBER: PCT/US01/23092
PRIOR PILING DATE: 2000-07-21
PRIOR APPLICATION NUMBER: US 60/220,038
PRIOR FILING DATE: 2000-07-28
PRIOR FILING DATE: 2000-07-28
PRIOR PILING DATE: 2000-07-28
PRIOR PILING DATE: 2000-09-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-01
SOFTWARE: PERL PROGRAM
SOFTWARE: PERL PROGRAM
SEQ ID NO: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No: 1698381CD1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10333314 to. US20030211093A1
                                                                                                                                                                                                                                                                                                                                                                                                                  ||||||||||||||||||||||||||EGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                         EGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 10, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-333-314-10
                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
```

ઠે

원

유 δ

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PNLVNLIEVFRRKRKAMILVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 15; Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97.0%; Score 1612; DB 17; Length 356; 90.6%; Pred. No. 3.9e-128; tive 0; Mismatches 0; Indels 32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Sequence 31, Application US/10363616; Publication No. US20040044181A1
; GENERAL INPORMATION:
; APPLICANT: Hyeeq, Inc
; TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES; FILE REFERENCE: 21272-113 (793)
; CURRENT APPLICATION NUMBER: US/10/363,616
; CURRENT FILING DATE: 2003-03-03
; PRIOR PILING DATE: 2000-09-01
; NUMBER OF SEQ ID NOS: 490
; SEQ ID NOS: 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 71.5%; Score 1188.5; DB 15; Lengtl Best Local Similarity 70.5%; Pred. No. 2.7e-92; Matches 213; Conservative 42; Mismatches 46; Indels
                     APPLICANT: Sands, Arthur T.

TITLE OF INVENTION: Novel Human. Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/10/766,691
CURRENT FILING DATE: 2000-09-27
PRIOR PRICA FILING DATE: 2000-09-27
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SEQ ID NOS: 13
SEQ ID NO 4
LENGTH: 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 90.6
Matches 310, Conservative
                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: homo sapiens
US-10-766-691-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
CRGANISM: Homo sapiens
US-10-363-616-391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-363-616-391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
241 BPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 NCIHRDIKPENILITKĢGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFWKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1636; DB 17; Length 347;
Pred. No. 3.5e-130;
0; Mismatches 0; Indels 32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        269 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: DOUGHOU, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Tedarich, Gleun
APPLICANT: Fiedrich, Gleun
APPLICANT: Friedrich, Gleun
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Polynuclectides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT FLING DATE: 2004-01-28
PRIOR FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
LENGTH: 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Friedrich, Glenn
                                                                                                                                                                                                                           Sequence 10, Application US/10766691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                           301 EGRNRRRQQV 310
                                                  301 EGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: homo sapiens
US-10-766-691-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 315; Conserv
                                                                                                                                                                                                      US-10-766-691-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-10-766-691-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218
```

엄

ઠે 원 ઠે

ઠે

셤

9

Ĥ

ò g ò g ò g ò g ઠે

```
121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62 PNLVNLLBVFRRKRRLHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180 SSVDIWAIGCVPAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09834496A
Fatent No. US/20020090701A1
GENERAL INFORMATION:
TITLE OF INVENTION: 14257 NOVEL PROTEIN KINASE MOLECULES AND TITLE OF INVENTION: THEIR USES THEREFOR
FILE REFERENCE: 38152000900
CURRENT APPLICATION NUMBER: US/09/834,496A
CURRENT APPLICATION NUMBER: 06/196,910
FRICE REPERION: 2000-04-13
FRICE REPERION NUMBER: 60/196,910
NUMBER: OF SEQ ID NOS: 7
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                 sequence 11, Application US/10174794

| Publication No. US20030166220A1
| Publication No. US20030166220A1
| Publication No. US20030166220A1
| Publication No. US20030166220A1
| TITLE OF INVENTION: EDNA, GENOMIC, AND PREDICTED PROTEIN
| TITLE OF INVENTION: ESQUENCES OF LEARNING-INDUCED KINASES
| FILE REFERENCE: 13761-707
| CURRENT APPLICATION NUMBER: US/10/174,794
| PRIOR PILING DATE: 1999-10-01
| PRIOR FILING DATE: 1999-10-02
| NUMBER OF SEQ ID NOS: 16-02
| NUMBER OF SEQ ID NOS: 16-02
| SEQ ID NO: 18-02
| SEQ ID NO: 18-02
| LENGTH: 35-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 71.2%; Score 1183.5; DB Best Local Similarity 71.8%; Pred. No. 7.2e-92, Matches 211; Conservative 41; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT;
; ORGANISM: Homo sapiens
US-10-174-794-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                  300 NE 301
|:
302 NK 303
                                                                                                                                 US-10-174-794-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-834-496A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-834-496A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                    8
                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   П
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                        PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                            NCIHRDIKPENILITKOGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                           180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                        PEPEDMETLEEKFSDVHPVALNFMKGCLKAMPDDRLTCSQLLESSYFDSFQEAQIKRKAR 299
                                                                                                                                                                                                                                                                                               2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKJALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
71.4%; Score 1186.5; DB 16; Length 338;
Best Local Similarity 70.5%; Pred. No. 3.8e-92;
Matches 213; Conservative 41; Mismatches 47; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 97, Application US/10664421
| Sequence 97, Application US/10664421
| Publication No. US20040142864A1
| GENERAL INFORMATION:
| APPLICANT: BREMER, RYAN
| APPLICANT: BRAHIAN, PRABHA
| APPLICANT: MANDIYAN, VALSAN
| APPLICANT: MANDIYAN, VALSAN
| APPLICANT: MANDIYAN, VALSAN
| APPLICANT: MANDIYAN, VALSAN
| APPLICANT: MILBURN, MICHAEL V
| TITLE OF INVERTION: COSTON OF SECURIAR APPLICATION NUMBER: US/10/664,421
| CURRENT FILING DATE: 2003-09-16
| PRIOR FILING DATE: 2002-09-16
| PRIOR FILING DATE: 2002-09-16
| MUMBER OF SEQ ID NOS: 169
| SOFTWARE: PatentIN Ver. 3.2
| SEQ ID NO 97
| TENGRIP 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
CAGANISM: Homo sapiens
US-10-664-421-97
                                                                                                                                                                                                                                                                                                                                                                           |:
NK 303
                                                                                                                                                                                                                                                                                                                                                   NE 301
                                          61
                                                                                                                     121
                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
```

원 ò

ò D à a ò g ò

239

121

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                         NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLITRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 PEIKESEPLERRYPKLSEVVIDLAKKCLHVDPDKRPFCAELLHHDFFQMDGFAERFSQEL 300
                                                                                                                                               PNLVNLIEVFRRKRKRMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                 61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 ENLVNLLEVCKKKKRWYLVPEFVDHTILDDLELFPNGLDDQVVQKYLPQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                               MGKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPIVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYENLGLVGEGSYGWVMKCRNKDSGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15; Gaps
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 58.2%; Score 967.5; DB 14; Length 566; Best Local Similarity 54.6%; Pred. No. 2.3e-73; Matches 177; Conservative 67; Mismatches 65; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: ESQUENCES OF LEARNING-INDUCED KINASES
FILE REPREBUCE: 13761-707
CURRENT FILING DATE: 2002-06-18
PRIOR PILING DATE: 1999-10-01
PRIOR APPLICATION NUMBER: US/09/411,628
PRIOR FILING DATE: 1999-10-01
PRIOR APPLICATION NUMBER: US 60/102,906
PRIOR PILING DATE: 1999-10-02
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FASESEQ FOR WINDOWS Version 4.0
   DB 9; Length 228;
                                       Indels
                                                                                                                                                                                                                                                                                              SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG 218
                                                                                                                                                                                                                                                                                                                        181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG 218
Score 1140; DB 9
Pred. No. 2e-88;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 4, Application US/10174794
Publication No. US20030166220A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , ORGANISM: Orcytolagus cuniculus US-10-174-794-4
   68.6%;
98.2%;
                                     Matches 214; Conservative
 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 4
LENGTH: 566
                                                                                                                                                                                                                                                                                                                                                                                                       US-10-174-794-4
                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                               ò
                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
```

```
Sequence 22, Application US/10369022

Sequence 22, Application US/10369022

Publication No. US20030203847A1

Sublication No. US20030203847A1

Sublication No. US20030203847A1

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Millennium Pharmaceuticals, Inc.

APPLICANT: Bios-Santiago, Inmaculada

ITILE OF INVENTION: METHODS AND COMPOSITIONS IN TREATING

ITILE OF INVENTION: 12216, 17719, 41897; 47174, 33408, 10002, 16209, 314, 656,

ITILE OF INVENTION: 27410, 33260, 619, 15985, 69112, 2158, 224, 615, 44373,

ITILE OF INVENTION: 1344 MOLECULES

ITILE OF INVENTION: 1344 MOLECULES

ITILE OF INVENTION: 1344 MOLECULES

ITILE OF INVENTION: 1344 MOLECULES

ITILE OF INVENTION: 1344 MOLECULES

ITILE OF INVENTION NUMBER: US/10/369,022

CURRENT FILING DATE: 2003-02-19

PRIOR FILING DATE: 2002-02-28

PRIOR FILING DATE: 2002-02-28

PRIOR PAPLICATION NUMBER: US 60/370,121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 ENLVNLLEVCKKKKRWYLVFEFVDHTILDDLELFPNGLDYQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | | :: | | | :: | | | :: | | | :: | | | :: | | | 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 14; Length 493;
US-10-174-794-10

Sequence 10, Application US/10174794

Publication No. US20030166220A1

GENERAL INFORMATION:
TITLE OF INVENTION: CDNA, GENONIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERRNCE: 13761-707

CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT FILING DATE: 1999-10-01

PRIOR APPLICATION NUMBER: US 60/102,906

PRIOR APPLICATION NUMBER: US 60/102,906

PRIOR FILING DATE: 1999-10-02

NUMBER OF SEQ ID NOS: 16

SOFTWARE: FastSEQ for Windows Version 4.0

LENGTH: 493

TYPE: PRI
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 56.6%; Score 941.5; DB 14; Length Best Local Similarity 53.1%; Pred. No. 3.2e-71; Matches 172; Conservative 68; Mismatches 69; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 QLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-174-794-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-369-022-22
```

```
US-10-757-262-108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-10-766-691-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Silos-Santiago, Inmaculada
APPLICANT: Bliasof Scort D. The Compositions for Treating Scort D. Tille OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING TILLS OF INVENTION: WECHOCOSICAL DISORDERS USING 44390, 54181, 211, 5687, 884, TITLE OF INVENTION: 3751, 2887, 4403, 30055, 2045, 16405, 18560, 2047, TITLE OF INVENTION: 3751, 2887, 14063, 20730, 22245, 2387, 52996, 69112, 14990, TITLE OF INVENTION: 18547, 115, 579, 15985, 15625, 760, 1863, 2395, 2554, 8675, TITLE OF INVENTION: 32720, 4809, 14303, 16816, 17827, 32620, 577, 619, 1423, TITLE OF INVENTION: 2158, 8263, 15402, 16209, 16386, 21165, 30911, 41897, 1643, TITLE OF INVENTION: 55053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PNLVNLIEVFRRKRKWHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69; Indels 15; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56.6%; Score 941.5; DB 1
53.1%; Pred. No. 3.2e-71;
tive 68; Mismatches 69
PRIOR FILING DATE: 2002-04-04
PRIOR PELING DATE: 2002-04-16
PRIOR PELING DATE: 2002-04-16
PRIOR PELING DATE: 2002-04-19
PRIOR FLILING DATE: 2002-04-19
PRIOR PLING DATE: 2002-04-19
PRIOR PELICATION NUMBER: US 60/377,717
PRIOR PELICATION NUMBER: US 60/379,949
PRIOR PELING DATE: 2002-05-13
PRIOR PELING DATE: 2002-05-13
PRIOR PELING DATE: 2002-05-13
PRIOR PELING DATE: 2002-06-13
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELICATION NUMBER: US 60/386,879
PRIOR PELING DATE: 2002-06-06
PRIOR PELING DATE: 2002-06-06
PRIOR PELING DATE: 2002-06-06
PRIOR PELING DATE: 2002-06-06
PRIOR PELING DATE: 2002-06-06
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-07
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
PRIOR PELING DATE: 2002-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |:| :||:||:||301 QLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 108, Application US/10757262
Publication No. US20040197825A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Karicheti, Venkateswarlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 53.1'
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-369-022-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
```

ò

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPEDMETLEEKFSDVHPVALNFMKGCLKONNPDDRLTCSQLLESSYF-----QEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56.6%; Score 941.5; DB 16; Length 493; 53.1%; Pred. No. 3.2e-71; .ive 68; Mismatches 69; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel Human Kinase Proteins and
Polynucleotides Encoding the Same
CURKENT FILING DATE: ZU04-01-14

PRIOR APPLICATION NUMBER: US 60/440,318

PRIOR FILING DATE: 2003-01-15

PRIOR FILING DATE: 2003-01-15

PRIOR PILING DATE: 2003-02-04

PRIOR PILING DATE: 2003-03-27

PRIOR PILING DATE: 2003-03-27

PRIOR PRIOR APPLICATION NUMBER: US 60/457,901

PRIOR PRIOR DATE: 2003-05-08

PRIOR PILING DATE: 2003-05-19

PRIOR PILING DATE: 2003-05-19

PRIOR PILING DATE: 2003-05-19

PRIOR PILING DATE: 2003-05-19

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIOR PILING DATE: 2003-07-18

PRIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Donoho, Gregory
APPLICANT: Donoho, Gregory
APPLICANT: Nehls, Michael
APPLICANT: Rriedrich, Glenn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OIK--RKARN-----EGRNRRROQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 56.6%
Best Local Similarity 53.1%
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
```

```
61 PNLVNLIEVPRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PNLVNLIEVPRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 47.6%; Score 791; DB 17; Length 198; Best Local Similarity 100.0%; Pred. No. 6e-59; Matches 151; Conservative 0; Mismatches 0; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Duroncho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Teriedrich, Glenn
APPLICANT: Eriedrich, Glenn
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Lax-0046-USA
CURRENT APPLICATION NUMBER: US/10/766,691
CURRENT PILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR APPLICATION NUMBER: US 60/156,511
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOSTWARE: FRSESQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
47.6%; Score 791; DB 17;
Best Local Similarity 100.0%; Pred. No. 5.6e-59;
Matches 151; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                                                     CURRENT FILING DATE: 2004-01-28
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
FILE REFERENCE: LEX-0046-USA
CURRENT APPLICATION NUMBER: US/10/766,691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; SEQ ID NO 8
: LENGTH: 198
; TYPE: PRT
; ORGANISM: homo sapiens
US-10-766-691-8
                                                                                                                                                                                                                                                                                                                TYPE: PRT
CRGANISM: homo sapiens
US-10-766-691-2
                                                                                                                                                                                                                                                        SEQ ID NO 2
LENGTH: 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
```

```
121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                g
```

Search completed: April 22, 2005, 07:36:43 Job time : 781.363 secs

THIS PAGE BLANK (USPTO)

Н

```
RKARNEGRNRRRQOVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 97, Appl
Sequence 5, Appli
Sequence 129900,
Sequence 6, Appli
Sequence 14, Appl
Sequence 14, Appl
Sequence 14, Appl
Sequence 14, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 118, Appl
Sequence 132, Appl
Sequence 1326, Appl
Sequence 1326, Appl
Sequence 11788, Appl
Sequence 11788, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 1178, Appl
Sequence 11786, Appl
Sequence 11786, Appl
Sequence 11786, Appl
Sequence 11786, Appl
Sequence 11786, Appl
                                                                                                                                                                           April 22, 2005, 06:47:40; Search time 14.2749 Seconds (without alignments) 1576.747 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                US-10-766-691-12
1662
1 MEKYEKLAKTGEGGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pending_Patents_AA_New:*

1. /cgn2_6/ptodata/1/paa/PCT_NEW_COMB.pep:*
2. /cgn2_6/ptodata/1/paa/USO6_NEW_COMB.pep:*
3. /cgn2_6/ptodata/1/paa/USO7_NEW_COMB.pep:*
4. /cgn2_6/ptodata/1/paa/USO9_NEW_COMB.pep:*
5. /cgn2_6/ptodata/1/paa/USO9_NEW_COMB.pep:*
6. /cgn2_6/ptodata/1/paa/USI0_NEW_COMB.pep:*
7. /cgn2_6/ptodata/1/paa/USI0_NEW_COMB.pep:*
8. /cgn2_6/ptodata/1/paa/USI1_NEW_COMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10.941-635-97
PCT-USO5-03526-5
PCT-USO5-03526-8
PCT-USO5-03526-8
PCT-USO5-03526-8
PCT-USO5-03526-8
PCT-USO4-30360-14
PCT-USO4-30360-14
US-10-941-635-14
US-10-941-635-14
US-10-941-635-14
US-10-941-635-14
US-10-941-635-14
US-60-643-717-7328
US-60-643-717-7328
US-60-643-717-9856
US-60-643-717-9856
US-60-643-717-9856
US-60-643-717-9856
US-60-643-717-9856
US-60-643-717-9856
US-60-643-717-9856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-60-643-717-12472
US-60-643-717-17436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-60-643-717-3546
US-60-643-717-10996
US-60-643-717-10239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  314081 segs, 71453778 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                        OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                            BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1504
1183.5
1183.5
941.5
941.5
720.5
720.5
569
567
567
567
                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5561.5
5561.5
5561.5
5561.5
5561.5
5561.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
5641.5
56
                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
No.
```

Sequence 14313, A Sequence 14791, A Sequence 11662, A Sequence 13623, A Sequence 16355, A Sequence 17, Appl Sequence 16441, A Sequence 16441, A Sequence 16553, A Sequence 16553, A Sequence 18840, A Sequence 15222, A Sequence 15222, A Sequence 15222, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 11541, A Sequence 2, Appli		ORPHOGENESIS AND METHODS OF	Length 485; Indels 6; Gaps 2;	VVKKIALREIRMLKQLKHP 61                    VVKKIALREIRMLKQLKHP 225	GUIKSVLWQTLQALN 115     ::	XTDXVATRWYRAPELLVGD 175                           XTDXVATRWYRAPELLVGD 345	1.GKLIPRHQSIPKSNGFFH 235                   1.GKLIPRHQSIPKSNGFFH 405	CSQLLESSYFDSFQEAQIK 295 
US-60-643-717-14313 US-60-643-717-11662 US-60-643-717-11662 US-60-643-717-15844 US-60-643-717-15844 US-60-643-717-15844 US-60-643-717-16441 US-60-643-717-16441 US-60-643-717-16480 US-60-643-717-16808 US-60-643-717-16853 US-60-643-717-16853 US-60-643-717-16853 US-60-643-717-16859 US-60-643-717-16859 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-16810 US-60-643-717-17-17-17-17-17-17-17-17-17-17-17-17	ALIGNMENTS	80503526 MODIFIERS OF BRANCHING MORPHOGENESI PCT/US05/03526 1-27 8 8	Score 1504; DB 1; L. Pred. No. 9.8e-89; 6; Mismatches 14;	EKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKHP  -	NLVNLIEVFRRRRRAGHLVFEYCDHTLLABLERNPNGVADGVIKSVLWOTLQALN 	FCHIHNCIHRDIKDENILITKQSIIKICDFGFAQILIPQDAYTDYVATRWYRAPELLVGD 	TQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFH 	GISIPEPEDMETLEEKESDVHPVALNFMKGCLKGMPDDRLTCSQLLESSYFDSFQEAQIK 
32.6 32.6 32.6 32.5 32.5 32.5 32.3 32.3 32.3 32.3 32.3		ULT 1  -USO5-03526-7  equence 7, Application PC/TUSO503526  ENERAL INFORMATION:  TITLE OF INVENTION: MASS MODIFIERS OF  FILE REFERENCE: EXO5-003C-PC  CURRENT PILING DATE: 2005-01-27  PRIOR APPLICATION NUMBER: PCT/USO5/03  PRIOR PTLING DATE: 2005-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PTLING DATE: 2004-01-28  PRIOR PRIOR OF SEQ ID NOS: 8  LENGTH: 485  TYPE: PRT  ORGANISM: Homo sapiens  -USO5-03526-7	90.5% imilarity 91.9% ; Conservative	EKYEKLAKTGEGSYGVVE :	NLVNLIEVFRRKRKMHLVFEY 	FCHIHNCIHRDIKPENII             QIMILQCIHRDIKPENII	TOYGSSVDIWAIGCVFAL                 TOYGSSVDIWAIGCVFAL	GISIPEPEDMETLEEKFS 
26 542 2 8 8 541 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		RESULT 1 FCT-USOS-03526-7 Sequence 7, Applicati GENERAL INFORMATION: TITLE OF INVENTION: FILE REFERENCE: EXOS CURRENT FILING DATE: CURRENT FILING DATE: PRIOR PILING DATE: NUMBER OF SEQ ID NOS SOFTWARE: PatentIN V SEQ ID NO 7 LENGTH: 485 LYPE: PRT CURGANISM: HOMO SAPI CREATER: 485 LYPE: PRT CREATER: PRT CREATER: HOMO SAPI CREATER: 485 LYPE: PRT CREATER: HOMO SAPI CREATER: 485 LYPE: PRT CREATER: HOMO SAPI CREATER: 485 CT-USOS-03526-7	Query Match Best Local S: Matches 294	Oy 2 Db . 166	Oy 62 Db 226	Qy 116 Db 286	Qy 176 Db 346	Qy 236 Db 406

USE

PCT-US04-30360-97

1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH Sequence 97, Application PC/TUS0430360
GENERAL INFORMATION:
APPLICANT: PLEXXIKON, INC.
TITLE OF INVENTION: MOLECULAR SCAFFOLDS FOR KINASE LIGAND DEVELOPMENT
FILE REFERENCE: 039363-1703
CURRENT APPLICATION NUMBER: PCT/US04/30360
CURRENT FILING DATE: 2004-09-15
PRIOR APPLICATION NUMBER: 60/503,277
PRIOR FILING DATE: 2003-09-15
NUMBER OF SEQ ID NOS: 167
SOFTWARE: PATENTIN VET. 3.2 71.2%; Score 1183.5; DB 1; Length 338; 71.8%; Pred. No. 1.8e-68; ive 41; Mismatches 41; Indels 1; OTHER INFORMATION: Description of Unknown Organism: Mammalian CT-US04-30360-97 Sequence 97, Application US/10941635 GENERAL INFORMATION: Query Match Best Local Similarity 71.8% Matches 211; Conservative TYPE: PRT ORGANISM: Unknown Organism SEQ ID NO 97 LENGTH: 338 10-941-635-97 61 62 FEATURE: a g g ò ò ઠ ò 셤 à g

Gaps

1;

```
PCT-US05-03526-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                  PNLVNLIEVFRRKRKRAMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                               179
                                                                                                                                                                                                                                                                                                                                     239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
9
                        APPLICANT: BREMER, RYAN E.
APPLICANT: BREMER, RYAN E.
APPLICANT: BLETIS, SAMUEL J.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: IBRAHIM, PRABHA L.
APPLICANT: ZUCKREWAN, REBECCA L.
TITLE OF INVENTION: WOLECULAR SCAFFOLDS FOR KINASE LIGAND DEVELOPMENT
FILE REFERENCE: 039363-1702
CURRENT FILING DATE: 2004-09-15
PRIOR APPLICATION NUMBER: 60/503,277
PRIOR APPLICATION NUMBER: 60/503,277
NUMBER OF SEQ ID NOS: 167
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: 2003-09-15
SOFTWARE: PATENTING DATE: APPLICATION OF STATUMENT DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE: PATENTING DATE
                                                                                                                                                                                                                                                                                     121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Description of Unknown Organism: Mammalian Organism: Mammalian US-10-941-635-97
```

```
APPLICANT: EXELIXES, INC.

TITLE OF INVENTION: MEMS AS MODIFIERS OF BRANCHING MORPHOGENESIS AND METHODS OF USE
FILE REPERENCE: EXCS-003-CPC
CURRENT APPLICATION NUMBER: PCT/USO5/03526
CURRENT FILING DATE: 2005-01-27
PRIOR APPLICATION NUMBER: US60/539,835
PRIOR FILING DATE: 2004-01-28
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin version 3.2
SEQ ID NO 5.
                                                                                                                                                    61 PNLVNLIEVFRKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                  121
                                                                                                                                                                                                                                  NCIHRDIKPENILITKOGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                   62 PNLVNLLEVFRRKRRLHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH
                                                                                                                                                                                                                                                      180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKOLKH
                                                                                                                                                                                                                                                                                                                               61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242 PDPEDMEPLELKFPNISYPALGLLKGCLHMDPTERLTCEQLLHHPYFENIREIE 295
                                                                                                                                                                                                                                                                                                                                                                                   240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ
         Length 338;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 493;
                                             41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
     DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56.6%; Score 941.5; DB 1;
53.1%; Pred. No. 6.4e-53;
tive 68; Mismatches 69;
   71.2%; Score 1183.5; DB (71.8%; Pred. No. 1.8e-68; iive 41; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293 QIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 OLKVOKDARNVSLSKKSONRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
PCT-USOS-03526-5
CGGuence 5, Application PC/TUSO503526
GENERAL INFORMATION:
Query Match
Best Local Similarity 71.8<sup>5</sup>
Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 53.1%
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                  121
                                                                                                               g
                                                                                                                                                      ઠ
                                                                                                                                                                                  셤
                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                 à
```

```
APPLICANT: EXELIXIS, INC.

TITLE OF INVENTION: MBMS AS MODIFIERS OF BRANCHING MORPHOGENESIS AND METHODS OF USE.

FILE REPERENCE: EXCED-003-CPC
CURRENT APPLICATION NUMBER: PCT/USOS/03526

CURRENT FILING DATE: 2005-01-27

PRIOR APPLICATION NUMBER: US60/539,835

PRIOR APPLICATION NUMBER: US60/539,835

NUMBER OF SEQ ID NOS: 8

SOFTWARE: Patentin version 3.2

SEQ ID NO 8
APPLICANT: EXELIXIS, INC.
TITLE OF INVENTION: MBMS AS MODIFIERS OF BRANCHING MORPHOGENESIS AND METHODS OF USE FILE REFERENCE: EXO5-003C-PC
CURRENT APPLICATION NUMBER: PCT/USO5/03526
CURRENT FILING DATE: 2005-01-27
PRIOR APPLICATION NUMBER: US60/539,835
PRIOR FILING DATE: 2004-01-28
NUMBER OF SEQ ID NOS: 8
SOFFWARE: Patentin version 3.2
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENLVNLIEVFROKKKIHLVFEFIDHTVLDELQHYCHGLESKRLRKYLFQILRAIDYLHSN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240 POVOHPKNARKKYPKLNGLLADIVHACLQIDPADRISSSDLLHHEYFTRDGFIEKFMPEL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSFQE---AQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1030;
                                                                                                                                                                                                                                                                                                                                            ; Score 784.5; DB 1; Length
; Pred. No. 5.8e-43;
61; Mismatches 91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43.4%; Score 720.5; DB 1;
larity 44.4%; Pred. No. 1.4e-38;
Conservative 69; Mismatches 98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Application PC/TUS0503526 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47.2%;
                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295 KRKARNEGR 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300 KAKLLQEAK 308
                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 150; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 139; Conserv
                                                                                                                                                                                                                                                                                                    PCT-US05-03526-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US05-03526-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT-US05-03526-8
                                                                                                                                                                                                                                  LENGTH: 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
OTHER INFORMATION: Coding regions on vcDNA: vcDNA=SeqID 56323; Strand=+; Position=1
OTHER INFORMATION: -84,137-220,381-502,552-634,972-1052,1156-1312,1385-1452,1528
OTHER INFORMATION: -1615,2100-2218
FEATURE:
OTHER INFORMATION: Homolog annotation: Hit ID=XP_355031.2; Match level="QueryCoverag OTHER INFORMATION: =99%, HitCoverage=75%, E-value=8e-96, Identity=51%"; Hit descript OTHER INFORMATION: =similar to cyclin-dependent kinase-like 1 (CDC2-related kinase)
OTHER INFORMATION: musculus]
                                                                                                                                                                         vaudin, Mark

vaudin, Mark

TITLE OF INVENTION: WIN WEI

TITLE OF INVENTION: IN PLANTS AND COMPOSITIONS THEREOF

FILE REPERENCE: 38-21(53885)

CURRENT APPLICATION NUMBER: US/60/655,875

NUMBER OF SEQ ID NOS: 171306

SEQ ID NO 129900

LENGTH: 35-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 AIRKIALREIRMLRQLKHPNLVVNLIEVFKRNRKLHLVPEHCDRTVLDDLERFPSGCPESL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 TKRLIFQLFSAIRFCCPESLTKRLIFQLFSAIRFCHSRNCIHRDIKPENILLITSNDVVKL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ------VADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKI 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 CDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWP 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ::||||: | |||||||||||||||: :|:
1 LDKYEKIGKIGEGSYGVVFKCRNRDTGELVAIKKFFESEDDPAIRKLVAIKKFFESEDDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43 VVKKIALREIRMLKQLKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----VVAVKKFVESEDDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GK--SDVDQLYLIIRTLG-------KLIPRHQSIFKSNGFFHGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDS 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 SIPEPEEHIGAPINFKNEFGI---FNXRCVEMDPKMRWSAEELLDHEYFRS 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (324)...(324)
OTHER INFORMATION: Xaa can be any naturally occurring amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54.7%; Score 909; DB 8; Length 350; 50.1%; Pred. No. 5.5e-51; ive 50; Mismatches 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQ------
                                                                    Sequence 129900, Application US/60655875 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT-US05-03526-6; Sequence 6, Application PC/TUS0503526; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Heterodera glycines
                                                                                                                   APPLICANT: Boukharov, Andrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 50.1
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc feature
LOCATION: (324)..(324)
                                                                                                                                             Du, Zijing
                                                                                                                                                                Liang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-60-655-875-129900
                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
```

ò 셤 ò 셤 ઠે 셤 ò 원 8

```
61 PNLVNLIEVFRRKRKNGHLVFEYCDHTLINELERNP-NGVADGVIKSVLWQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PNIVKLEDVIHTENKLYLVFEFLHQDLKKFMDASALTGIFLFSYLFQLLQGLAFCHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120 HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179 GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: PLEXXIKON, INC.
TITLE OF INVENTION: MOLECTILAR SCAFFOLDS FOR KINASE LIGAND DEVELOPMENT
FILE REPERENCE: 039363-1703
CURRENT APPLICATION NUMBER: PCT/US04/30360
CURRENT FILING DATE: 2004-09-15
PRIOR APPLICATION NUMBER: 60/503,277
PRIOR PILING DATE: 2003-09-15
NUMBER: OF SEQ ID NOS: 167
SOFTWARE: Patentin Ver. 3.2
SEQ ID NO 14
LENTH: 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238 SIPE--PEDMETLEEKFSDVHPV----ALNFWKGCLKMNPDDRLTCSQLLESSYF 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 51, Application PC/TUS0430360
GENERAL INFORMATION:
DEPLICANT: PLEXXIXON, INC.

TITLE OF INVENTION: MOLECULAR SCAFFOLDS FOR KINASE LIGAND DEVELOPMENT
FILE REPERENCE: 039363-1703
CURRENT APPLICATION NUMBER: PCT/US04/30360
CURRENT FILING DATE: 2004-09-15
PRIOR PLILING DATE: 2003-09-15
NUMBER OF SEQ ID NOS: 167
SOFTWARE: PATCHING DATE: 2003-09-15
SOFTWARE: PATCHING DATE: 2003-09-15
SOFTWARE: PATCHING DATE: 2003-09-15
SOFTWARE: PATCHING DATE: 2003-09-15
SOFTWARE: PATCHING DATE: 2003-09-15
LENGTH: 298
                                                                                                                                                                                                                                                                                                                                               ) OTHER INFORMATION: Description of Unknown Organism: Mammalian ; OTHER INFORMATION: protein sequence PCT-US04-30360-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Unknown Organism: Mammalian OTHER INFORMATION: protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
34.1%; Score 567; DB 1;
Best Local Similarity 40.0%; Pred. No. 2.8e-29;
Matches 118; Conservative 60; Mismatches 99;
                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Unknown Organism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Unknown Organism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT-US04-30360-51
                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &. 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: DOMAIN
LOCATION: (115).
OTHER INFORMATION: Protein kinases ATP-binding region proteins domain identified
OTHER INFORMATION: by eMATRIX, accession number BL00107A, p-value=8.500e-27, raw
OTHER INFORMATION: score of 18.39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: (4)...(180)
OTHER INFORMATION: Bukaryotic protein kinase domain identified by PFam,
OTHER INFORMATION: accession name pkinase, E-value=3.5e-65, PFam score of 230.0
                                                                       70 ENIVELKEAFRRGKLYLVFEYVEKNMLELLEEMPNGVPPEKVKSYIYQLIKAIHWCHKN 129
                                                                                                                                                          249 FPAVNHPQSLERRYLGILNSVLLDLAMKNLKLDPADRYLTEQCLN---HPTFQTQRLLDR 305
                                             NCIHRDIKPENILITKQGIIKICDFGFAQILIPGD--AYTDYVATRWYRAPELLVGDTQY 178
                                                                                                                                GSSVDIWALGCVFAELLTGQPLWPGKSDVDQLYLITRTLGKLIPRHQSIFKSNGFFHGIS 238
                                                                                                                                                                                                                     239 IPEPEDMETLEEKFSDV-HPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRK 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 PNLVNLIEVFRKKKKWHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 NCIHRDIKPENILITKOGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 34.2%; Score 569; DB 6; Length 224; Best Local Similarity 59.4%; Pred. No. 1.6e-29; Matches 107; Conservative 32; Mismatches 39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Hyseq, Inc
TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
FILE REFERENCE: 790CIP3/US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT PAPELICATION NUMBER: US/10/450,763
CURRENT FILING DATE: 2003-06-11
PRIOR APPLICATION NUMBER: PCT/US01/08631
PRIOR FILING DATE: 2001-03-30
PRIOR FILING DATE: 2000-03-31
PRIOR PLING DATE: 2000-03-31
PRIOR PLING DATE: 2000-03-31
PRIOR PILING DATE: 2000-03-31
PRIOR FILING DATE: 2000-03-31
PRIOR FILING DATE: 2000-08-23
NUMBER OF SEQ ID NOS: 60736
SEQ ID NO 36501
LENGTH: 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 36501, Application US/10450763; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                          298 ARNEGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                    306 SPSRSAKKKPYHV 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-450-763-36501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-450-763-36501
                                                                                                                                   179
                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
                                                                                g
                                                                                                                  ò
                                                                                                                                                                   CD
                                                                                                                                                                                                                                                        셤
                                           ઠ
                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                               음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

231

9

Gaps

18;

Length 298 99; Indels

```
1 MEKYEKLAKIGEGSYGVVFKCRNKISGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                     9
                                                                                Gaps
                                       18;
                                       99; Indels
Query Match 34.1%; Score 567; DB 1;
Best Local Similarity 40.0%; Pred. No. 2.8e-29;
Matches 118; Conservative 60; Mismatches 99
                                                                 ઠે
                                                                                          셤
```

PCT-US04-30360-14 i Sequence 14, Application PC/TUS0430360

```
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-11-021-951-168
                                                                                                                                                                                                                                                                            LENGTH: 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   쇰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                         APPLICANT: BREMER, RYAN E.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: HURT, CLARENCE R.
APPLICANT: HURT, CLARENCE R.
APPLICANT: BRAHIM, PRABHA L.
APPLICANT: ZUCKERMAN, REBECA L.
TITLE OF INVENTION: MOLECULAR SCAFFOLDS FOR KINASE LIGAND DEVELOPMENT
FILE REPREMENCE: 039363-1702
CURRENT APPLICATION NUMBER: US/10/941,635
CURRENT FILING DATE: 2004-09-15
PRIOR PRILING DATE: 2003-09-15
NUMBER OF SEQ ID NOS: 167
SOFTWARE: Patentin Ver: 3.2
SEQ ID NO 14
LENGTH: 298
TYPE: no.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178
                                                                                  178
                                    231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PNIVKLLDVIHTENKLYLVFEFLHQDLKKFMDASALTGIPLPLIKSYLFQLLQGLAFCHS 120
                                                                                                                                                     179 GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI- 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 HRVLHRDLKPQNLLINTEGAIKLADFGLARAFGVPVRTYTHEVVTLWYRAPEILLGCKYY 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI- 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 STAVDIWSLGCIFAEMVTRRALFPGDSEIDQLFRIFRTLGT------PDEVVWPGVT 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLWQTLQALNFCHI
                                                                                  HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY
                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PNLVNLIEVPRRKRKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLWQTLQALNFCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99; Indels 18; Gaps
                                                                                                                                                                                                                          SIPE--PEDMETLEEKFSDVHPV----ALNFWKGCLKMNPDDRLTCSQLLESSYF 286
                                                                                                                                                                                                                                                         SMPDYKPSFPKWARQDPSKVVPPLDEDGRSLLSQMLHYDPNKRISAKAALAHPFF 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIPE--PEDMETLEEKFSDVHPV----ALNFMKGCLKMNPDDRLTCSQLLESSYF 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Description of Unknown Organism: Mammalian OTHER INFORMATION: protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 34.1%; Score 567; DB 6; Best Local Similarity 40.0%; Pred. No. 2.8e-29; Matches 118; Conservative 60; Mismatches 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Unknown Organism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-941-635-14
                                               61
                                                                                  120
                                                                                                                                                                                                                        238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                δ
                                                                                                               g
                                                                                                                                                   ò
                                                                                                                                                                                    셤
                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
```

US-10-941-635-51 ; Sequence 51, Application US/10941635

```
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    179 GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI- 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLWQTLQALNFCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GEREKAL INCOMANTION:
APPLICANT: HAUPTS, Ulrich
APPLICANT: KOLTERMANN, Andreas
APPLICANT: SCHEIDIG, Andreas
APPLICANT: SCHEIDIG, Andreas
APPLICANT: COTSMEIER, Christian
APPLICANT: COCO, Wayne Michael
TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
TITLE OF INVENTION: NAO BERS: US/11/021,951
CURRENT APPLICATION NUMBER: US/11/021,951
CURRENT FILING DATE: 2004-06-18
PRIOR APPLICATION NUMBER: 60/524,960
PRIOR APPLICATION NUMBER: 60/524,960
PRIOR APPLICATION NUMBER: EP 04003058
PRIOR APPLICATION NUMBER: EP 04003058
PRIOR APPLICATION NUMBER: EP 04003058
PRIOR FILING DATE: 2004-02-11
PRIOR APPLICATION NUMBER: EP 04003058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238 SIPE--PEDMETLEEKFSDVHPV----ALNFMKGCLKMNPDDRLTCSQLLESSYF 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: BREMEN K.
APPLICANT: BREMEN K.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: GILLETTE, SAMUEL J.
APPLICANT: HURT, CLARRICE R.
APPLICANT: IBRAHIM; PRABHA L.
APPLICANT: ZUCKERMAN, REBECCA L.
APPLICANT: ZUCKERMAN, REBECCA L.
TITLE OF INVENTION: MOLECULAR SCAPPOLDS FOR KINASE LIGAND DEVELOPMENT
FILE REFERENCE: 039363-1702
CURRENT APPLICATION NUMBER: US/10/941,635
PRIOR FILING DATE: 2004-09-15
PRIOR FILING DATE: 2003-09-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99; Indels 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEATURE:

OTHER INFORMATION: Description of Unknown Organism: Mammalian

OTHER INFORMATION: protein sequence
US-10-941-635-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 34.1%; Score 567; DB 6; Length 298; Best Local Similarity 40.0%; Pred. No. 2.8e-29; Matches 118; Conservative 60; Mismatches 99; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 168, Application US/11021951
                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 167
SOFTWARE: Patentin Ver. 3.2
SEQ ID NO 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Unknown Organism
DEAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
```

```
287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        288
                                                   ద
                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                           PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLMQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                     HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY 178
                                                                                                                                                                                                                                                                                                                               GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI- 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                231
                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                     61 PNLVNLIEVFRRKRKWHLVFEYCDHTLLN-----ELERNPNGVADGVIKSVLWQTLQAL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                173 VGDTQYGSSVDIWAIGCVFABILITGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNG 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238 SIPE--PEDMETLEEKFSDVHPV----ALNFWKGCLKMNPDDRLTCSQLLESSYF 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMPDYKPSFPKWARQDFSKVVPPLDEDGRSLLSQMLHYDPNKRISAKAALAHPFF 286
                                                                                                                                                                                                                          99; Indels 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 294;
                                                                                                                                                                                             34.1%; Score 567; DB 7; Length 298; 40.0%; Pred. No. 2.8e-29; Ive 60; Mismatches 99; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18889, Application US/60643717
GENERAL INFORMATION:
APPLICANT: Abad, Mark S.
TITLE OF INVENTION: Genes and Uses for Plant Improvement
FILE REFERENCE: 38-21 (53629) A
CURRENT APPLICATION NUMBER: US/60/643,717
CURRENT FILING DATE: 2005-01-12
NUMBER OF SEQ ID NOS: 19247
LENGTH: 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 33.8%; Score 561.5; DB 8; Best Local Similarity 37.0%; Pred. No. 6.2e-29; Matches 115; Conservative 69; Mismatches 92;
PRIOR FILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR FILING DATE: 2003-11-10
PRIOR APPLICATION NUMBER: EP 03013819
PRIOR FILING DATE: 2003-06-18
NUMBER OF SEQ ID NOS: 191
SOFTWARE: Patentin version 3.1
SEQ ID NO 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT ORGANISM: Saccharum officinarum
                                                                                                                                                                                                                       Matches 118; Conservative
                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-60-643-717-18889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-60-643-717-18889
                                                                                                                                                               US-11-021-951-168
                                                                                                                     LENGTH: 298
TYPE: PRT
                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                            179
                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                232
                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
233 FFHGIS-IP-----EPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSGLLE 282
                    177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSĠQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PNLVNLIEVFRRKRKWHLVFBYCDHTLLNELERNPNGVADG--VIKSVLWQTLQALNFCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119 IHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178 YGSSVDIWAIGCVFABLLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              238 -SIPE-----PEDM-ETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF
                                                                                                                                                                                                                                                                                                                                                                                                                                         27;
                                                                                                                                                                                                                                                                                                                                                                                                            Length 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                       Sequence 7327, Application US/60643717
SEQUENCE INFORMATION:
APPLICANT: Abad, Mark S.
TITLE OF INVENTION: Genes and Uses for Plant Improvement FILE REFERENCE: 38-21(53629)A
CURRENT APPLICATION NUMBER: US/60/643,717
NUMBER OF SEQ ID NOS: 19247
SEQ ID NO 7327
                                                                                                                                                                                                                                                                                                                                                                                                          DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                       Score 555.5; DB 8 Pred. No. 1.5e-28;
                                                                                                                                                                                                                                                                                                                                                                                           33.4%; Scc... 37.3%; Pred. No. ... 72; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: April 22, 2005, 07:09:11 Job time : 15.2749 secs
                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Pneumocystis carinii
                                                                                              284 HEYFKDLEMVQ 294
                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 113; Conservative
                                                              283 SSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSF 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DDF 290
                                                                                                                                            RESULT 15
US-60-643-717-7327
                                                                                                                                                                                                                                                                                                                                                                       US-60-643-717-7327
```

us-10-766-691-12.rpr

```
S22745
serine/threonine protein kinase KKIALRE (BC 2.7.1..) - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 19-Dec-1997
C;Accession: S22745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          serine/threonine protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein kinase (EC
                                                                                                                                                                                                              April 22, 2005, 03:32:53 ; Search time 25.6949 Seconds (without alignments) 1179.546 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cyclin-dependent k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                 US-10-766-691-12
1662
1 MEKYEKLAKTGEGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283416
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283416 segs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A37871
S23095
A44349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S22745
S23382
S40021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S24913
T49271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A29539
145977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B44349
S19209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A44878
S36619
S42566
S57928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JQ2243
S42049
S06011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S22440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S53538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIR 79: *
1: pir1: *
2: pir2: *
3: pir3: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match
                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1183.5
1175.5
175.5
571.5
571.5
571.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.5
567.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Result
No.
```

10	cyclin-dependent k protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase Cdc CDK-activating pro protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC protein kinase (BC	WENTS  KKIALRE - human  -oct-1994 #text_change 09-Jul-2004  1, L.K.; Gorka, C.; Nelson, C.; Harlow, E.; Tsaj  rotein kinases  PMID:1639063  PMID:1639063  POtein, protein kinase homology  rockin; protein kinase homology  rockin; protein kinase homology  rockin; protein kinase homology  rockin; protein kinase	: protein kinase APP-binding motif 9/Active site: Lys, Glu, Asp, Lys #status predicted 71.2%; Score 1183.5; DB 2; Length 358; imilarity 71.8%; Pred. No. 5.1e-48; conservative 41; Mismatches 41; Indels 1; Gaps 1;    Conservative 41; Mismatches 41; Indels 1; Gaps 1;   Conservative 41; Mismatches 41; Indels 1; Gaps 1;   Conservative 41; Mismatches 41; Indels 1; Gaps 1;
30 544 32.7 293 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	JE0374 149592 149592 843101 843101 831332 8717115 717115 852441 85241 871003	ALIGN ision 15 C.L.; S C.L.; S elated p 92347325 ot shown 2; EMBL:: nsformin	Publication of the following of the foll
30 544 32.7 293 31 543 32.7 292 33 543 32.7 292 34 543 32.7 297 34 543 32.7 297 34 543 32.7 297 36 549 32.7 297 37 539 32.5 32.6 294 38 535.5 32.2 302 39 530.5 31.9 294 41 528 31.8 294 42 527.5 31.7 346 43 527.5 31.7 346 44 525 31.6 332 525 31.6 332 525 31.6 332 527.5 31.7 346 528 31.8 294 528 31.8 294 527.5 31.7 346 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 294 528 31.8 32.7 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.6 332 528 31.8 528 528 31.8 5	•	dc2 rev Wu, Wu, ID:	##; ##; ##; ##; ##; ##; ##; ##; ##; ##;
30 544 32.7 22 31 543 32.7 22 33 543 32.7 22 33 541.5 32.6 22 34 32.7 22 35 543 32.7 22 36 540 32.5 22 37 22.3 32.6 22 38 535.5 31.9 22 40 535.5 31.9 22 40 535.5 31.9 22 40 535.5 31.9 22 41 528 31.9 22 42 527.5 31.7 33 43 527.5 31.7 33 44 527.5 31.7 33 45 527.5 31.7 33 47 528 48 525 31.6 33.6 67 68 67 67 67 67 67 68 67 67 67 67 67 69 67 67 67 67 67 69 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 60 67 67 67 67 67 67 60 67 67 67 67 67 67 60 67 67 67 67 67 67 67 67 67 67 67 67 67	00000000000000000000000000000000000000	ann) o codo ; Mul	SSDV SSDV SSDV SSDV SSDV SSDV SPDVI
30 544 32.7 31 543 32.7 33 543 32.7 34 543 32.7 34 543 32.7 34 541.5 32.6 35 541.5 32.6 36 540.5 37 539 32.2 39 530.5 31.9 42 527.5 31.6 42 527.5 31.7 43 525 31.6 44 525 31.6 45 525 31.6 46 523 83.8 EMBO J. 1. 20.9 EMBO J. 240 EPEEDMETI  Oy 1. 21 DEPEDMETI  Oy 240 PEPEDMETI  Oy 240 PEPEDMETI  Oy 241 PEPEDMETI  Oy 242 EPEEDMETI  Oy 242 EPEEDMETI  Oy 242 EPEEDMETI  Oy 242 EPEEDMETI		1.3' (m; (m; (m; (m; (m; (m; (m; (m; (m; (m;	Site Site Site Site Site Site Site Site
30 544 31 343 32 343 33 541.5 34 343 34 543 34 543 34 543 35 541.5 36 40 528 40 528 41 528 42 525 43 525 44 525 44 525 44 525 44 525 44 525 45 640 67	332.77 332.77 332.77 332.77 331.79 331.77	(EC 2.7. sapiens sapiens sapiens sapiens sapiens sapiens) specific sapiens sap	Active Active Mailarity Conser Conser
33 333 333 333 333 333 333 333 333 334 335 336 336 337 337 337 337 337 337 337 337	2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2	kinase es: Homo 15-0cr 510, 0cr 71, 290 11, 290 11, 290 sion: S2 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S3 sion: S4 s	Match 129 129 129 127,129 129 127,129 129 121
		RESULT : S23181 S23181 S23181 Drotein C; Specif C; Access R; Meyer R; Meyer R; Meyer A; Refer A; Molecu A; Molecu A; C; Superf C; Superf	F;3-15;9; Query, Best 1 Best 0 Oy Oy Oy Oy Oy Oy

N

235

```
protein kinase (EC 2.7.1.37) cdc2 homolog - slime mold (Dictyostelium discoideum)
(Species: Dictyostelium discoideum
(Spate: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004
(SAccession: 840021; 839071
(R.Michaelis, C.E.; Weeks, G.
Submitted to the EMBL Data Library, August 1992
A.Description: The unicellular organism Dictyostelium discoideum possesses a highly related the ference number: 840021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Accession: $40021
A;Accession: $40021
A;Actubranary
A;Actubranary
A;Actubranary
A;Cross-references: UNID:9403117; EMBL:L00652; NID:g167695; PIDN:AAA16056.1; PID:g167699; Michaelis, C.; Weeks, G.
Biochim. Biophys. Acta 1179, 117-124, 1993
A;Title: The isoclation from a unicellular organism, Dictyostelium discoideum, of a highly A;Accession: $39071; MUID:94032415; PMID:8218353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Complex: In various organisms, cdc2 has been identified as a component of the M-phase s C;Superfamily: kinase-related transforming protein; protein kinase homology C;Superfamily: kinase-related transforming protein; protein kinase homology c;Rywordss ATP; cell cycle control; phosphoprotein; phosphotransferase; serine/threonine F;2-254/Domain: protein kinase homology <KIN.> F;2-254/Domain: protein kinase ATP-binding motif F;33,51,126,128/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                           117 CHIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGD 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --VESEDDPVVKKIALREIRMLKQ 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 RVLHRDLKPONLLINRKGELKLADFGLARAFGIPVRTYSHEVVTLWYRAPDVLMGSRKYS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 NCIHRDIKPENILITKOGIIKICDFGFAQIL-IPGDAYIDYVATRWYRAPELLVGDTQYG 179
                                  | :-::|: | | | | : | | | | : | | : | | : | | : | | : | | : | | | : | | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | : | | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : :
                                                                                                                                 58 LKHPNLVNLIEVFRRKRKRKMHLVFEYCDHTLLNELERNPNG-VADGVIKSVLWQTLQALNF
                                                                                                                                                                                                                                                                                                                                                                                                176 TQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGPFH
                                                                                                                                                                                                                                                                                                                                                                                                                                             GIS-IPE----PE-DMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PNLVNLIEVFRKKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PNIVRLHDVIHTERKLTLVFEYLDQDLKKYLDECGGEISKPTIKSFMYQLLKGVAFCHDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG-----KLIPRHQSIF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34.6%; Score 574.5; DB 2; Length 292; 37.5%; Pred. No. 3.7e-20; ive 64; Mismatches 93; Indels 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
A;Molecule type: mRNA
Residues: 1-18, YY, 20-188, 'G',190-292 <MI2>
A;Cross-references: EMBL:L00652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 37.55
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289 FQEAQIKRK 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289 PEPSPAAKO 297
                                                                                                                                                                                                                                                                                                                                    118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                     Q
                                                                                                                          ò
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E.; Tsa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cross-references: UNIPROT:Q00526; EMBL:X66357; NID:936612; PIDN:CAA47001.1; PID:936613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A)Cross-references: GDB:283456
A;Map position: 12q13-12q13
C;Superfamily: Kinase-related transforming protein; protein kinase homology
C;Superfamily: Kinase-related transforming protein; protein kinase homology
C;Keywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein
F;2-255/Domain: protein kinase homology <KIN>
F;10-18/Region: protein kinase ATP-binding motif
F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C.; Nelson, C.; Harlow,
Whilted to the EWBL Data Library, May 1992
A;Reference number: $22743
A;Reference number: $22743
A;Reference number: $22743
A;Retaus: preliminary
A;Molecule type: mRNA
A;Residues: 1-376 <MEX>
A;Residues: 1-376 <MEX>
A;Residues: 1-376 <MEX>
A;Cross-references: EMBL:X66359
C;Genetics: 152/3; 170/3
C;Superfamily: kinase-related transforming protein; protein kinase homology
C;Reywords: ATP: phosphotransferase; serine/threonine-specific protein kinase
F;3-296/Domain: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PNLVNLIEVPRRKRKMHLVPEXCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCIHRDIKPENILITKQGIIKICDFGFAQILI--------PGDAYTDYV 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRHOSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLL 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 ATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLITRTLGKLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Homo sapiens (man)
C;Date: 18-Jun-1993 #sequence_revision 18-Jun-1993 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Accession: $23382; $22743

R; Meyerson, M.; Enders, G.H.; Wu, C.L.; Su, L.K.; Gorka, EMBO J. 11, 29292917, 1992

A; Title: A family of human cdc2-related protein kinases

A; Reference number: $23382; MUID:92347325; PMID:1639063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.2e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35.0%; Score 581; DB 2;
39.8%; Pred. No. 1.9e-20;
tive 66; Mismatches 96,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
70.7%; Score 1175.5;
Best Local Similarity 67.6%; Pred. No. 1.2e
Matches 211; Conservative 41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein kinase (EC 2.7.1.37) cdk3 - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Accession: S23382
A,Status: nucleic acid sequence not shown
A,Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ESSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HHPYFENIREIE 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 39.89
Matches 123; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Residues: 1-305 <MEY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene: GDB: CDK3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
```

'n

9 9 120 120

us-10-766-691-12.rpr

셤

δ

a

ð

```
protein kinase (BC 2.7.1.37) cdc2 [similarity] - goldfish
C;Species: Carassius auratus (goldfish)
C;Species: Carassius auratus (goldfish)
C;Accession: 150474
C;Accession: 150474
R;Kajiura, H.; Yamashita, M.; Katau, Y.; Nagahama, Y.
B;Kajiura, H.; Yamashita, M.; Katau, Y.; Nagahama, X.
A;Title: Isolation and characterization of goldfish cdc2, a catalytic component of mature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,Cross-references: UNIPROT:P51958; GB:D17758; NID:9471097; PIDN:BAA04605.1; PID:9471098
C;Superfamily: kinase-related transforming protein; protein kinase homology
                                                                                                                                                                                                                                                                                                                                    ė,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173 VGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNG 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233 FFHGIS-IP-----EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLE 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNG--VADGVIKSVLWQTLQALNFC 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60 HPNVVRLLDVLMQESKLYLVPEFLSMDLKKYLDSIPSGQFMDPMLVKSYLYQILEGILFC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118 HIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDT 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLN-----ELERNPNGVADGVIKSVLWQTLQAL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transforming protein; protein kinase homology
                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKF-VESEDDPVVKKIALREIRMLKQLK
                                                                                                                                                                                                                                                                                                                                                                                          MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                    35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90; Indels 33;
A,Status: preliminary
A,Molecule type: mRNA
A,Residues: 1-294 <COL>
A,Residues: 1-294 <COL>
A,Residues: 1-294 <COL>
CISUSA-references: GBLM60526
C;Superfamily: kinase-related transforming protein; protein kinase
C;Keywords: ATP; phosphotransferase
F;2-256/Domain: protein kinase homology <KIN>
F;10-18/Region: protein kinase ATP-binding motif
F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                 DB 2; Length 294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Keywords: ATP; phosphotransferase
P2-256/Domain: protein kinase homology <KIN>
F:10-18/Region: protein kinase ATP-binding motif
F:33,51,128,130/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 302;
                                                                                                                                                                                                                                                                                                  ,'1e-20;
nes 92; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
34.3%; Score 570.5; DB 1
Best Local Similarity 38.6%; Pred. No. 5.8e-20;
Matches 120; Conservative 68; Mismatches 90
                                                                                                                                                                                                                                                                           Query Match
34.4%; Score 571.5;
Best Local Similarity 37.6%; Pred. No. 5.1e
Matches 117; Conservative 67; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: translated from GB/EMBL/DDBJA;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283 SSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     284 HEYFKDLEMVÖ 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: I50474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Residues: 1-302 <KAJ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: I50474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Accession: B40444
R;Colasanti, J.; Tyers, M.; Sundaresan, V.
Proc. Natl. Acad. Sci. U.S.A. 88, 3377-3381, 1991
A;Title: Isolation and characterization of CDNA clones encoding a functional p34 (cdc2)
A;Reference number: A40444; MUID:91195354; PMID:2014258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoding a functional p34 (cdc2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TPIDIWSALCIFAEMASGRPLFPGSGTSDQLFRIFKILGTPNEESWPSITELPEYKTDFP 240
                                                                                        283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----LDEK-----GLNLLSKMLQYDPNQRITAAAALKH 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLN-----ELERNPNGVADGVIKSVLWQTLQAL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   173 VGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNG 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            233 FFHGIS-IP-----EPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLE 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein kinase (EC 2.7.1.37) cdc2 homolog A - maize
C;Species: Zea mays (maize)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein kinase (BC 2.7.1.37) cdc2 homolog B - maize (fragment)
C;Species: Zea mays (maize)
C;Date: 14-Feb-1992 #sequence_revision 14-Feb-1992 #text_change 28-Feb-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Superfamily: kinase-related transforming protein; protein kinase homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----KSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 34.4%; Score 571.5; DB 1; Length 294; Best Local Similarity 37.9%; Pred. No. 5.1e-20; Matches 118; Conservative 66; Mismatches 92; Indels 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Kerwords: ATP; phosphotransferase
;2-256/Domain: protein kinase homology <KIN>
;10-18/Region: protein kinase ATP-binding motif
;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Accession: A40444
R;Colasanti, J; Tyers, M.; Sundaresan, V.
Proc. Natl. Acad. Sci. U.S.A. 88, 3377-3381, 1991
A;Title: Isolation and characterization of cDNA clones e A;Reference number: A40444; MUID:91195354; PMID:2014258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Residues: 1-294 <COL>
A;Cross-references: GB:M60526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           283 SSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               284 HEÝFKDLEVVÝ 294
                                                                                                                                           241 VHPAHQLSSIVHG
                                                                                                                                                                                                    284 SYFDSFQ 290
                                                                                                                                                                                                                                                  283 PYFDGLE 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A, Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: A40444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: B40444
                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176
                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B4044
```

임

셤

ठ

g Š g ð 원 8

ò

```
R;Ninomiya-Tsuji, J.; Nomoto, S.; Yasuda, H.; Reed, S.I.; Matsumoto, K.
Proc. Natl. Acad. Sci. U.S.A. 88, 9066-9010, 1991
A;Title: Cloning of a human cDNA encoding a CDC2-related kinase by complementation of a lakeference number: A41227; MUID:92020980; PMID:171994
A;Accession: A41227
A;Molecule type: mRNA
A;Residues: 1-298
A;NINS
A;Cross-references: UNIPROT:P24941; GB:M68520; NID:g180177; PIDN:AA35667.1; PID:g180178
B;Tsai, L.H.; Harlow, E.; Meyerson, M.
Nature 353; 174-177, 1991
A;Title: Isolation of the human cdk2 gene that encodes the cyclin A- and adenovirus EIA-6
A;Reference number: S17873; MUID:91367262; PMID:1653904
A;Status: preliminary
A;Molecule type: mRNA
A;Status: preliminary
A;Molecule type: mRNA
A;Status: preliminary
A;Molecule type: mRNA
A;Reference GB:K62071; NID:g312802; PIDN:CAA43985.1; PID:g312803
B;Elledge, S.J.; Spottswood, M.R.
EMBO J. 10, 2653-2659, 1991
A;Title: A new human p34 protein kinase, CDK2, identified by complementation of a cdc28 n
A;Grans: preliminary
A;Reference number: S16520; MUID:91330891; PMID:174386
A;Status: preliminary
A;Reference number: S16520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein kinase (EC 2.7.1.37) cdk2 - African clawed frog
N;Alternate names: cell division control protein CDC2 homolog Eg1
C;Species: Xenopus laevis (African clawed frog)
C;Date: 30-Apr-1991 #sequence revision 30-Apr-1991 #text_change 09-Jul-2004
C;Accession: A37871; S15666; I51622; 314410
R;Paris, J; Le Guellec, R.; Couturier, A.; Le Guellec, K.; Omilli, F.; Camonis, J.; Mach
Proc. Natl. Acad. Sci. U.S.A. 88, 1039-1043, 1991
A;Title: Cloning by differential screening of a Xenopus cDNA coding for a protein highly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A, Map position: 1203-12013

C, Superfamily: kinase-related transforming protein; protein kinase homology

C, Superfamily: kinase-related transforming protein; protein kinase homology

C, Keywords: ATP; cell cycle control; mitosis; phosphoprotein; phosphotransferase;

C, 2255/Domain: protein kinase homology «KIN»

F; 10-18/Region: protein kinase ATP-binding motif

F; 14, 160/Binding site: phosphate (Thr) (covalent) #status predicted

F; 15, Binding site: phosphate (Tyr) (covalent) #status predicted

F; 15, Binding site: phosphate (Tyr) (sovalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLWQTLQALNFCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120 HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIRTLGKLIPRHQSIFKSNGFFHGI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-176,'S',178-298 <ELL>
A;Cross-references: EMBL:X61622; NID:g29848; PIDN:CAA43807.1; PID:g29849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIPB--PEDMETLEEKFSDVHPV----ALNFWKGCLKMNPDDRLTCSQLLESSYF 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.1%; Score 567; DB 2;
40.0%; Pred. No. 8.3e-20;
tive 60; Mismatches 99,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Cross-references: GDB:128984; OMIM:116953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local'Similarity 40.0%
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: GDB: CDK2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Secaration kinase (EC 2.7.1.37) cdc2 homolog 1 - rice
C; Species Oryza sativa (rice)
C; Species Oryza sativa (rice)
C; Species Oryza sativa (rice)
C; Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004
C; Accession: S22440
R; Hashimoto, J; Hirabayashi, T; Hayano, Y.; Hata, S.; Ohashi, Y.; Suzuka, I.; Utsugi, Nol. Gen. Genet. 233, 10-16, 1992
A; Title: Isolation and characterization of cDNA clones encoding cdc2 homologues from Ory
A; Reference number: S22440; MUID: 92293101; PMID: 1376401
A; Reference number: S22440; MUID: 92293101; PMID: 1376401
A; Residues: 1-294 cHAS>
A; Caross-references: UNIPROT: P29618; EMBL: X60374; NID: 920342; PIDN: CAA42922.1; PID: 920343
A; Cross-references: UNIPROT: P29618; EMBL: X60374; NID: 920342; PIDN: CAA42922.1; PID: 920343
C; Reywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein k; F; 2-256/Domain: protein kinase homology cKIN>
F; 10-18/Region: protein kinase ATP-binding motif
F; 33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
     227 IF---KSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLES 283
                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PNLVNLIEVFRRKRKNHLVFEYCDHTLLN-----ELERNPNGVADGVIKGVLWQTLQAL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VGDTOYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTIGKLIPRHQSIFKSNG 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG------KLIPRHQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein kinase (EC 2.7.1.37) cdk2 - human
NyAlternate names: Eg1 homolog; protein kinase p34
C;Species: Homo sappiens (man)
C;Date: 17-Jul.1992 #sequence revision 17-Jul-1992 #text_change 09-Jul-2004
C;Accession: A41227; S17873; S16520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233 FFHGI-SIP-----EPEDMETLEEKFSDVHPVALNFMKGCLKWNPDDRLTCSQLLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 34.2%; Score 568.5; DB 2; Best Local Similarity 37.6%; Pred. No. 7e-20; Matches 117; Conservative 67; Mismatches 92;
                                                                                                                                                                                                                                                                                                                          PYFDDLDKSTL 295
                                                                                                                                                                                                                                                                                       SYFDSFQEAQI 294
                                                                                                                                                                                                                                       240 TFPKWKSG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283 SSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HEYFKDLEMVQ 294
                                                                                                                                                                                                                                                                                       284
                                                                                                                                                                                                                                                                                                                                        285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 9
                             유
                                                                                                                           셤
                                                                                                                                                                    ò
                                                                                                                                                                                                                       P
                                                                              ò
                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
```

serine,

9

180

Ŋ

```
Directin kinase (EC 2.7.1.37) cdc2-A [similarity] - African clawed frog N;Alternate names: maturation-promoting factor p34cdc2 chain A C;Species: Xenopus laevis (African clawed frog)
C;Species: Xenopus laevis (African clawed frog)
C;Bate: 05-May-2000 #sequence_revision 05-May-2000 #text_change 09-Jul-2004
C;Accession: A44349
R;Pickham, K.M.; Meyer, A.N.; Li, J.; Donoghue, D.J.
Mol. Cell. Biol. 12, 3192-3203, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 37.11
Matches 111; Conservative
                                                                                                                                                                                       A;Residues: 1-294 <INZ>
A;Experimental source: flower
                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-294 <HIF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: JQ1337
                                                                                                           A; Accession: A48984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Accession: JQ0967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
A44349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ∂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,Cross-references: UNIPROT:P24100; EMBL:D10850; NID:g217848; PIDN:BAA01623.1; PID:g2178
                                                                                                                                                                                                                                          A; Molecule type: mRNA A; Molecule type: mRNA A; Molecule type: mRNA A; Molecule type: mRNA A; Molecule type: 1-92, TR. '94-297 <LEA> A; Residues: 1-92, TR. '94-297 <LEA> A; Cross-references: EMBL:X14227; NID:964665; PIDN:CAA32443.1; PID:964666 B; Olive, M.; Theze, N.; Philippe, M.; Le Pennec, J.P.; Lerivray, H. Molecele S. I. 1994 A; Title: Cloning of the Xenopus laevis cdk2 promoter and functional analysis in oocytes A; Reference number: IS1662; MUID:95129896; PMID:7828909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDC2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Superfamily: kinase-related transforming protein; protein kinase homology
C;Reywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein
F;2-255/Domain: protein kinase homology <KIN>-
F;10-18/Region: protein kinase ATP-binding motif
F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A.Title: Exon-intron organization of the Arabidopsis thaliana protein kinase genes A.Reference number: $23095; MUID:92316202; PMID:1618302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229 KSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDS 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein kinase (EC 2.7.1.37) cdc2 - Arabidopsis thaliana N;Alternate names: cdc2 protein homolog; CDC2a protein; cell division control (C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 22-Nov-1993 #sequence revision 03-Nov-1995 #text_change 09-Jul-2004 C;Accession: S21095; A48984; JQ1337; JQ0967; S18202 R;Imajuku, Y.; Hirayama, T.; Endoh, H.; Oka, A. FEBS Lett. 304, 73-77, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MENFOKVEKIGEGTYGVVYKARNRETGEIVALKKIRLDTETEGVPSTAIREISLLKELNH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PNLVNLIEVFRKRKRKMLVFEYCDHTLLNELE-RNPNGVADGVIKSVLWQTLQALNFCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 HRVLHRDLKPONLLINSDGAIKLADFGLARAFGVPVRTFTHEVVTLWYRAPEILLGCKFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     179 GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG------KLIPRHQSIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cross-references: EMBL:U07979; NID:g473584; PIDN:AAA82123.1; PID:g473585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
A; Reference number: A37871; MUID: 91126051; PMID:1704128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y Match 34.0%; Score 565.5; DB 2
Local Similarity 37.8%; Pred. No. 9.7e-20;
                                                                                                     Cross-references: UNIPROT: P23437; UNIPROT: Q9PSU0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Molecule type: DNA
A:Residues: 1-39 <OLI>
                                                                                                                            R;le Guellec, R. submitted to the EMBL Data Library, January 1989 A;Reference number: $15866 A;Accession: $15866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 P------KWIRQDFSKVVP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 37.89
Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         289 FQEAQIK 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NKRISAK 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-294 <IMA>
                                                     A;Molecule type: mRNA
A;Residues: 1-297 <PAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: I51662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: S23095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
```

```
A;Note: sequence extracted from NCBI backbone (NCBIP:109461)
R;Hirayama, T.; Imajuku, Y.; Anai, T.; Matsui, M.; Oka, A.
R;Hirayama, T.; Imajuku, Y.; Anai, T.; Matsui, M.; Oka, A.
A;Hitle: I69-165, 1991
A;Title: Identification of two cell-cycle-controlling cdc2 gene homologs in Arabidopsis t
A;Reference number: JQ1337; MUID:92039027; PMID:1937013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,Description: phosphotransferase; protein kinase; required for G1 to S-phase transition; C;Superfamily: kinase-related transforming protein; protein kinase homology C;Keywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein ki P;2-256/Domain: protein kinase homology «KIN» F;10-18/Region: protein kinase ATP-binding motif F;10-18/Region: protein kinase ATP-binding motif F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PNLVNLIEVFRRKRKRKMHLVFEYCDHTLLNELERNPNGVAD-GVIKSVLWQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 HNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQ 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLG------KLIPRHQSI 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A)Cross-references: EMBL:X57839; NID:g16218; PIDN:CAA40971.1; PID:g16219
R:Ferreira, P.C.G.; Hemerly, A.S.; Villarroel, R.; Van Montagu, M.; Inze,
Plant Cell 3, 531-540, 1991
A;Title: The Arabidopsis functional homolog of the p34cdc2 protein kinase.
A;Reference number: JQ0967; MUID:93005715; PMID:1840925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   228 FKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A)Residues: 1-294 <FER>
A)Rooss-references: GB.845387; NID:g257373; PIDN:AAB23643.1; PID:g257374
A)Experimental source: flower
C)Comment: The protein is a key component of the eukaryotic cell cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.8%; Score 561.5; DB 2; Length 294; 37.1%; Pred. No. 1.5e-19; ive 70; Mismatches 93; Indels 25
                                                                                                                                                                                                            A;Status: preliminary; not compared with conceptual translation A;Molecule type: nucleic acid
R;Inze, D.; Ferreira, P.; Hemerly, A.; Van Montagu, M. Biochem. Soc. Trans. 20, 80-84, 1992 A;Title: Control of cell division in plants. A;Reference number: A48984; MUID:92339744; PMID:1634002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Introns: 3/3; 65/2; 105/3; 163/3; 218/2; 247/3; 265/3
```

```
C'Accession: T49271
R.R.R.eger, M.; Gabel, C.; Mueller-Auer, S.; Schaefer, M.; Zipp, M.; Mewes, H.W.; Rudd, submitted to the Protein Sequence Database, April 2000
                                   HPNIVSLQDVLMQDSRLYLIFEFLSMDLKKYLDSIPPGQFMDSSLVKSYLYQILQGIVFC 119
                                                                                                 HIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDT 176
                                                                                                                                                                                                                   177 QYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHG 236
                                                                                                                                                                                                                                                                                                                                                                                     | | | :: | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | : | | : | : | | : | : | : | | : | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PNLVNLIEVFRRKRKAMHLVFEYCDHTLLNELERNPNGVAD-GVIKSVLWQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120 HNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQ 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237 ISIPEPEDMETLEEKFSDVHPVA------LNFWKGCLKMNPDDRLTCSQLLESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N;Alternate names: protein T21J18.20
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Jun-2000 #sequence_revision 02-Jun-2000 #text_change 09-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drotein kinase (EC 2.7.1.37) cdc2 - human
N;Alternate names: cell division control protein 2 (CDC2)
C;Species: Homo sapiens (man)
C;Date: 30-Jun.1988 #sequence_revision 30-Jun-1988 #text_change 09-Jul-2004
C;Accession: A22539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |:| :| :| :| || | | : : || || snivkyddvyhsekrelyinoldedenen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 YGSSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLG------KLIPRHQSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Map position: 3
A;Introns: 3/3; 67/3; 105/3; 163/3; 218/2; 247/3; 265/3
C;Superfamily: kinase-related transforming protein; protein kinase
                                                                                                                                                                                                                                                          :| : ||||:|| :|||| | :||: || | : :|||: | | | | | : :|||: | | | | | : :|||: | | | | | : :|||: | | : :|||: | | :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Residues: 1-294 <RIE>
A;Cross-references: EMBL;AL132963; GSPDB;GN00061; ATSP:T21J18.20
A;Experimental source: cultivar Columbia; BAC clone T21J18
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 33.5%; Score 556.5; DB 2; Best Local Similarity 36.8%; Pred. No. 2.5e-19; Matches 110; Conservative 70; Mismatches 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CELL DIVISION CONTROL PROTEIN 2 HOMOLOG A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ||| : |||:
286 YFDDL-DNOIKK 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YFDSFQEAQIKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: ATSP: T21J18.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: T49271
                                      09
                                                                                                 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                   셤
                                                                                              8
                                                                                                                                                  g
                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
A; Title: Requirement of mos(Xe) protein kinase for meiotic maturation of Xenopus oocytes A; Reference number: A44349; MUID:92318937; PMID:137775
A; Accession: A44349
A; A44349
A; Residues: 1-302 < PIC>
A; Residues: 1-302 < PIC>
A; Residues: 1-302 < PIC>
A; Residues: UNIPROT:P35567; GB:M60680; NID:g214022; PIDN:AAA63561.1; PID:g214023
A; Experimental source: oocytes
A; Note: sequence extracted from NCBI backbone (NCBIN:107682, NCBIP:107683)
                                                                                                                                                                                                                                             C;Superfamily: kinase-related transforming protein; protein kinase homology C;Keywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein F;2-256/Domain: protein kinase homology <KIN> F;10-18/Region: protein kinase ATP-binding motif F;33,51,128,130/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A.Molecule type: mRNA
A.Residues: 1-297 <KAN>
A.Cross-references: UNIPROT:P39951; EMBL:X60767; NID:957533; PIDN:CAA43177.1; PID:957534
Coss-references: UNIPROT:P39951; EMBL:X60767; NID:957533; PIDN:CAA43177.1; PID:957534
C.Superfamily: kinase-related transforming protein; protein kinase homology of NINS
F;2-256/Domain: protein kinase homology <KINS
F;10-18/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNLVNLIEVFRRKRKKHLVFEYCDHTLLNELERNPNG - - VADGVIKSVLWQTLQALNFCH 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119 IHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQ 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SRRVIHRDLKPQNLLIDSKGVIKLADFGLARAFGIPVRVYTHEVVTLMYRAPEVLLGSVR 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKIGEGSYGVVFKCRNKISGQVVAVKKF-VESEDDPVVKKIALREIRMLKQLK 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Kanaoka, Y.; Nojima, H.; Okayama, H.
submitted to the EMBL Data Library, July 1991
A;Description: Nucleotide sequences of cDNAs encoding rat cdc2 + and cyclin
A;Reference number: S20689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   227 VWPEVESLQDYKNSFPKWKGGSLSANVKNIDKDGLDLLAKMLIYDPAKRISARKALLHPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .Species: Rattus norvegicus (Norway rat)
.Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----SDVHPVALNFMKGCLKMNPDDRLTCSQLLESSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32;
                                                                                                                                                                                                                                                                                                                                                                                                                                         33.6%; Score 559; DB 1; Length 302; llarity 36.7%; Pred. No. 2e-19; Conservative 68; Mismatches 102; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33.5%; Score 557; DB 1; Le
39.1%; Pred. No. 2.4e-19;
ive 63; Mismatches 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein kinase (EC 2.7.1.37) cdc2 [similarity] - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FDSFQEAQIKRKARNEGRN 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FDDLDKSSL---PDNOIRN 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 39.1%;
Matches 122; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIPEPEDMETLEEKF-
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Accession: S24913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Accession: S24913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

à

엄 ઠ

ò

9

S

```
A;Gene: GDB:CDC2
A;Cross-references: GDB:119052; OMIM:116940
A;Cross-references: GDB:119052; OMIM:116940
A;Cross-references: GDB:119052; OMIM:116940
A;Cross-references: Ind21.1-10621.1
C;Superfamily: kinase-related transforming protein; protein; phosphotransferase; serine c;Superfamily: kinase-related transforming protein; phosphotransferase; serine c;Ze5/Domain: protein kinase homology «KIN»
F;10-18/Region: protein kinase ATP-binding motif
F;10-18/Region: protein kinase ATP-binding motif
F;14,161/Binding site: phosphate (Tyr) (covalent) #status predicted
F;15/Binding site: phosphate (Tyr) (covalent) #status predicted
F;33,51,128,130/Active site: Lys, Glu, Asp, Lys #status predicted
iLee, M.G.; Nurse, P.
ature 327, 31-35, 1987
fittle: Complementation used to clone a human homologue of the fission yeast cell cycle
Reference number: A29539; MUID:87201915; PMID:3553962
                                                                                                                                                                                                                    ;Molecule type: mRNA
;Residues: 1-297 <LEES
;Cross-references: UNIPROT:P06493; GB:X05360; NID:g29838; PIDN:CAA28963.1; PID:g29839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96; Indels 32; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.5%; Score 556; DB 2; Length 297; 39.4%; Pred. No. 2.7e-19; tive 61; Mismatches 96; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 39.4*
Matches 123; Conservative
                                                                                                                                                                               Accession: A29539
```

120 HSRRVLHRDLKPQNLLIDDKGTIKLADFGLARAFGIPIRVYTHEVVTLWYRSPEVLLGSA 179

g

ઠે

g

ò

<del>ያ</del>

177 QYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHG 236

60 HPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNG--VADGVIKSVLWQTLQALNFC 117

ያ ያ

 227 -VWPEVESLQDYKNTFPKWKPGSLASHVKNLDENGLDLLSKMLIYDPAKRISGKMALNHP 285

285 YFDSFQEAQIKR 296 ||: : |||: 286 YFNDL-DNQIKK 296 Search completed: April 22, 2005, 06:51:40 Job time : 26.6949 secs

THIS PAGE BLANK (USPTO)

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

OM protein - protein search, using sw model

Run on:

April 22, 2005, 01:29:40; Search time 82.7946 Seconds (without alignments) 1948.255 Million cell updates/sec

US-10-766-691-12 1662 1 MEKYEKLAKTGEGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 315 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

1612378 seqs, 512079187 residues Searched:

1612378 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

UniProt\_03:\*
1: uniprot\_sprot:\*
2: uniprot\_trembl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

														•																		
	Description	Q6axj9 brachydanio	Oscego mus musculu	Q6qua0 homo sapien							Q675r9 oikopleura	Q92772 homo sapien	mus	Q9quk0 mus musculu		Q6gmd6 xenopus lae	rattı		homo		_	Q9grt9 leishmania	Q8bkr2 mus musculu	Q8b149 mus musculu	Q9jm02 rattus norv	Q9jm01 rattus norv	Q8blf2 mus musculu	mus m	homo	homo	homo	Q8bve0 mus musculu
SUMMARIES	ID	Обахлэ	O8CEQ0	Q6QUA0	Q66HE7	KKIA HUMAN	Q7QBG7	Q9U2H1	Q9VMN3	Q9TTK0	Q675R9	092772	Q9QY12	Q9QUK0	Q9QY11	Федире	Q6TXH3	Q9P114	Q8IVW4	Q9BMG2	Q8K134	Q9GRT9	Q8BKR2	Q8BL49	Q9JM02	Q9JM01	QBBLF2	Q8BWI8	Q8IYC7	STK9_HUMAN	Q8WXQ5	Q8BVE0
	DB	7	~	~	N	-	~	0	~	~	N	N	~	~	7	~	~	~	~	~	~	ď	N	~	~	~	~	7	~	Н	7	0
	* Query Match Length	350	352	358	352	358	367	353	392	266	385	493	564	568	329	320	651	455	592	657	353	1106	457	585	457	505	595	783	831	1030	993	578
	& Query Match	72.8	72.6	71.5	71.2	71.2	62.3	61.8	61.8	58.2	57.6	9.95	56.0	56.0	55.8	55.6	55.3	47.2	47.2	47.0	46.3	46.3	46.2	46.0	45.9	45.9	45.7	43.4	43.4	43.4	42.6	42.3
	Score	1209.5	1206	1188.5	1184	1183.5	1035.5	1027.5	1027.5	967.5	928	941.5	930.5	930.5	928	924	919.5	784.5	784.5	781	770	769.5	767.5	764.5	763.5	763.5	759.5	720.5	720.5	720.5	708	702.5
	Result No.		~	m	4	S	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31

O9w6r6 fugu rubrip O7rm49 plasmodium 000526 homo sapten O9zril triticum ae P34117 dictyosteli P23437 xenopus lae O661h7 xenopus lae O661h7 xenopus lae O71317 brachydanio P29618 oryza sativ O9dga2 oryzias jav P24941 homo sapien P24111 zea mays (m	
09WER6 Q7RM49 DR3 HUMAN Q9ZRI CC2H DICDI CC2H DICDI CC2H DICDI CC2H DICDI Q61H7 CDC2 CARAU Q77317 CDC2 CARAU Q77317 CDC2 QRYAA CDC2 HUMAN CDC2 HUMAN	Carro
884848484444	4
1100 200 3005 2092 2097 2097 2098 2098 2098	) )
644 581.5 581.5 571.5 571.5 570.5 570.5 570.5 567.5 567.5	۳ ٥
и и и и и и и и и и и и и и и и и и и	7

## ALIGNMENTS

Q6AXJ9	JJ JG JGAXJ9 DRELIMTVARY, DRT: 350 AA.
AC A	
占	(TrEMBLrel. 28, Creat
3 5	
DE	in.
N	
SO	Brachydanio rerio (Zebrafish) (Danio rerio).
36	bukaryota; metazoa; cnordata; cranlata; vercebrata; buteleoscomi;
38	Actinoprerygii, Neoprerygii, ieleosrei; Osrallophysi; Cypinhiolike
3 8	Cyprinidae; Janio.
N N	NCB1_raxiu='/955;
20	SECTIENCE FROM N.A.
RC C	STRAIN=Singapore local strain; TISSUE=Embryo;
X	PubMed=12477532; DOI=10.1073/pnas.242603899;
RA	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA	Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
æ	Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
<b>RA</b>	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
R.	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
æ	Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E
RA	Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
æ	Raha S.S., Loquellano N.A., Peters G.J., Abramson K.D., Mullany S.J.
Z :	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,
<b>§</b> :	KICHAIGE S., WOILEY K.C., Hale S., GAICLA A.M., GAY L.O., BULYN S.*
5 6	VILIDATOR D.R., FULLIN D.M., SOUCHELDIN, L.A., GLUDS N.M., Eshey, T. Hellton F. Ketteman M. Madan b. Bodriches S. Sanchez A.
5 2	Whiting M Madan A Young A C Shevchenko Y Bouffard G.G.
R.	Blakesley R.W. Touchman J.W., Green E.D., Dickson M.C.,
RA BA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S
RA	Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA	1 M.A.;
RT	"Generation and initial analysis of more than 15,000 full-length hu
RI	and mouse cDNA sequences.";
RL	Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
Z.	[2]
RP	SEQUENCE FROM N.A.
Z Z	STRAIN=Singapore local strain; TISSUE=Embryo;
æ	
RL	Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
DR.	i; BC079506;
ΩK	GO:0005524; F:ATP binding; IEA.
DR	
ä	GO: 0004713;
DR.	00:05 00:05
DR DR	IPR011009;
E I	
D.	IPR002290;
R	IPR008271;
Z.	1245;
DR.	.Ptam; PF00069; PK1nase; 1.

~

```
60,770 full-length cDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           352 AA;
                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                          PNLVNLIEVFRRKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                      SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                 121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                      PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQE--AQIKRK 297
                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                          9
                                                                                                                                                SEQUENCE FROM N.A.
STRANIE-STBL/61/ TISSUE=Testis;
STRANIE-STBL/61/ TISSUE=Testis;
The FANTOM CONSORTIUM
THE RIKEN Genome Exploration Research Group Phase I & II Team;
The RIKEN Genome Exploration Research Group Phase I & II Team;
                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=99279253; Pubmed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male testis cDNA, RIKEN full-length enriched
library, clone:4933411017 product:cyclin-dependent kinase-like 1
CDC2-related kinase), full insert sequence.
                                                                                                                   3,
                                                                                             DB 2; Length 350;
                                                                                                                45; Indels
     SMART; SM00220; S TKC; 1.
SMART; SM00219; TYTKC; 1.
SMART; SM00219; TYTKC; 1.
PROSITE; PS0011; PROTEIN KINASE ATP; 1.
PROSITE; PS00119; PROTEIN KINASE ST; UNKNOWN 1.
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN 1.
ATP-binding; Kinase; Transferase.
SEQUENCE 350 AA; 40810 MW; 9804440EB0E38BEI CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                           72.8%; Score 1209.5; DB:
69.8%; Pred. No. 1.5e-77;
ive 47; Mismatches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
PD000001; Prot_kinase; 1
                                                                                                                                                                                                                                                                                                                                                              LDRKKRTROPRKHLP 315
                                                                                                       69.88;
                                                                                                                                                                                                                                                                                                                                           298 ARNEGRNRRRQQVLP 312
                                                                                                                220; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Name=Cdkl1;
                                                                                                                                                                                                                                                                                                                                                               301
                                                                                           Query Match
Best Local S
                                                                                                                                                                            61
                                                                                                                                                                                                61
                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                 Q8CEQ0
                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
Q8CEQ0
셤
                                                                                                                                                                          ò
                                                                                                                                                                                          g
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                           g
```

```
RC STRAIN-CSTBL/60; TISSUE=Testis;
RA Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
RA Arakawa T., Boro H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA Hanagaki T., Hara A., Hayatsu N., Hirancto K., Hiracka T., Hori F.,
RA Hanagaki T., Hara Y., Kohn M., Izawa M., Kasukawa T., Raco H.,
RA Marsuyama T., Kojima Y., Kohn M., Koya S., Kurihara C.,
RA Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
RA Matsuyama T., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai Y.,
RA Sano H., Sasaki D., Shibata K., Shibata K., Shiraki T.,
RA Soqabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA Soqabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA Soqabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y., Suzuki Y.,
RA Soqabe Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Э
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                  SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subbraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKRFLETEDDPVIKKIALREIRMLKOLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN=CTSTHI,64; TISSUE=Testis;
STRAIN=CTSTHI,64; TISSUE=Testis;
STRAIN=CTSTHI,64; TISSUE=Testis;
Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P.,
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
"RIKEN integrated sequence analysis (RIGA) system-384-format
Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41023 MW; 6E9F56C8080F35E0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 72.6%; Score 1206; DB 2; Best Local Similarity 68.9%; Pred. No. 2.7e-77; Matches 222; Conservative 42; Mismatches 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00220; S.TKG; I.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS500101; PROTEIN KINASE DON; 1.
ATP-binding; Cyclin; Kinase; Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00069; Pkinase; I.
ProDom; PD000001; Prot_kinase; 1.
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

m

셤

셤 Š 요 ò 셤

8

```
TISSUE=Kidney;

XX Pubmed=12477932; DOI=10.1073/pnas.242603899; Pubmed=12477932; DOI=10.1073/pnas.242603899; Pubmed=12477932; Pelingold B.A., Grouse L.H., Derge J.G., Rausberg R.L., Felingold B.A., Grouse L.H., Shenmen C.M., Schuler G.D., Riausberg R.L., Felingold B.A., Bapteron K.H., Schaefer C.F., Bhat N.K., Altschul S.F., Zeeberg B. B. Buetow K.H., Schaefer C.F., Bhat N.K., Diatchenko L., Marusha K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Saares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Uedin T.B., Toshiyuki S., Carninci P., Prange C., Andreas S., Loquellano N.A., Peters G.J., Abramson R.D., Millahy S.J., McKerran K.J., Malek J.M., Gay L.J., Hulyk S.W., M. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Marra M., Touchman J.W., Green B.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., K.Y., Marra M.A., Young A.C., Shevchenko Y., Bouffard G.G., Albackiguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., K.Y., Marra M.A., Touchman J.W., Schmutz J., Myers R.M., Schein J.E., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schnerch A., Schner A., Schnerch A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., Schner A., S
                           242 PDPEDMEPLELKFPNISYPALGLIKGCLHMDPTERLTCEQLLHHPYFENIREIEDLAKEH 301
                                                                                                          PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ1KRKAR
     180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Director MGC Project;
Submitted (SEP-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, BC081896; AAH81896.1;
InterPro; IPR011009; Kinase like.
InterPro; IPR00719; Prot Kinase.
InterPro; IPR008219; Ser_thr_pkinase.
InterPro; IPR008271; Ser_thr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ll protein.
352 AA; 40899 MW; DB9CDF5464E66E24 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71.2%; Score 1184; DB 2;
69.0%; Pred. No. 9.7e-76;
iive 45; Mismatches 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PFAM; PF00069; PKINAS6; I.
ProDom; PD000001; Prot_kinase; 1.
SWART; SM00220; S TKC; 1.
SWART; SM00210; PYKC; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS00109; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-0CT-2004 (TrEMBLrel. 28, 25-0CT-2004 (TrEMBLrel. 28, 25-0CT-2004 (TrEMBLrel. 28, Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
es 214; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10116;
                                                                                                                                                                                                                  300 NE 301
                                                                                                                                                                                                                                                                    NK 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical
                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                  Q66HE7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                              RESULT 4
Q66HE7
                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                          ò
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                 용
                                                                                  239
                                                                                                                                   240
                                                                                                                                                                                       294
241 PDPEDMETLELKFPNISYSALGFLKGCLHMDPAERLICEQLLQHPYFDSIREVGELTRQH 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                          2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH
                                                                                  SSVDIWAIGCVFAELLTGOPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                       PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEA----QI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVPKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S. Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; Submitted (JAN-2004) to the EMBL/GenBank/DDBJ databases. EMBL, AYS25548; AAS00095.1; -- HSSP; P24941; 1838.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0004674; F:Drotein serine/threonine kinase activity; IEA.
GO; GO:0004713; F:protein-tyrosine kinase activity; IEA.
GO; GO:0006406; F:protein-tyrosine kinase activity; IEA.
GO; GO:0016740; F:rransferase activity; IEA.
Interpro; IPR01009; Kinase like.
Interpro; IPR000199; Prot kinase.
Interpro; IPR002290; Ser_thr_pkinase.
Interpro; IPR001245; Tyr_pkinase.
Interpro; IPR001245; Tyr_pkinase.
Interpro; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Probom; PD000001; Prot_Kinase; 1.
SMART; SM00220; S TKc; 1.
SMART; SM00219; TyrKc; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN 1.
ATP-binding; Cyclin; Kinase; Transferase.
SEQUENCE 358 AA; 41833 MW; 823E432BF84B77C6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-2004 (TrEMBLrel. 27, Last sequence update) 05-JUL-2004 (TrEMBLrel. 27, Last annotation update) Cyclin-dependent kinase-like 1 (CDC2-related kinase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71.5%; Score 1188.5; DB 3
Local Similarity 70.5%; Pred. No. 4.8e-76;
Les 213; Conservative 42; Mismatches 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last seq
05-JUL-2004 (TrEMBLrel. 27, Last ann
                                                                                                                                                                                                                                                                                            295 KRKARNEGRNRRRQ----QVLP 312
                                                                                                                                                                                                                                                                                                                                              301 DKPARKTLROSRKHLTGLOYLP 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Name=CDKL1
                              121
                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q6QUA0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q6QUA0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q6QUA0
```

ઠે 셤 ò g 8 5

Gaps

120 121

09 61

Gaps

181 239 241

셤 ò g ò g ò ద

g 8

ઠ

```
61 PNLVNLIEVFRRKRKKKHLVFEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPPHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Probom, PD000001; Prot kinase; 1.

SWART; SW00220; S TKC; 1.

A PROSITE; PS00107; PROTEIN KINASE ATP; 1.

DR PROSITE; PS00119; PROTEIN KINASE DOM; 1.

DR PROSITE; PS00108; PROTEIN KINASE ST; 1.

KW ATP-binding; Serine/threonine-protein kinase; Transferase.

DOMAIN 5 288 ATP (By similarity).

11 19 ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).

ATP (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anopheles gambiae str. PEST.
Metazoa; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Anopheles.
NCBI_TaxID=1809454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Anopheles Genome Sequencing Consortium,
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preliminary data.

EMBL; AAABO1008819; EAA08474.1; -.
HSSP; P24941; 1010.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0016740; F:transferase activity; IEA.

GO; GO:0006468; P:protein amino acid phosphorylation; IEA.

InterPro; IPR011009; Kinase_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
AgCP3044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000119; Proc Kinase.
InterPro; IPR000121; Ser thr_pkin_AS.
Pfam; PF00069; Pkinase; I.
Probom; PD000001; Prot kinase; I.
PROSITE; PS00107; PROTEIN KINASE_ATP; I.
PROSITE; PS00110; PROTEIN KINASE_DOM; I.
PROSITE; PS00108; PROTEIN KINASE_ST; UNKNOWN_I.
ATP-binding; Kinase; Iransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=agCG55557; ORFNames=ENSANGG0000012213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=PEST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               070BG7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
Q7QBG7
                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                            PNLVNLIEVFRRKRKAMHLVFEYCDHTLLNELERNPNGVADGVIKSVLMOTLOALNFCHIH 120
                                                                                                                                                                                                   NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                         180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLITRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                        PEPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSFQE-AQIKRKA 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                    9
                                                                                              MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATALYTIC ACTIVITY: ATP + a protein = ADP + a phosphoprotein. SIMILARITY: Belongs to the Ser/Thr protein kinase family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIM; 603441; -. 609. MIM; 603441; -. 609. MIM; 6034693; F:cyclin-dependent protein kinase activity; TAS. GO; 600.0064693; F:cyclin-dependent protein kinase activity; TAS. GO; GO:0000074; P:protein amino acid phosphorylation; TAS. InterPro; IPR011009; Kinase like. InterPro; IPR000719; Prot. Kinase. InterPro; IPR000719; Ser_thr_pkin_AS. InterPro; IPR002290; Ser_thr_pkin_AS. FR00069; Pkinase; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=92347325; PubMed=1639063; Meyerson M., Enders G.H., Wu C.-L., Su L.-K., Gorka C., Nelson Harlow E., Tsai L.-H.; "A family of human cdc2-related protein kinases."; EMBO J. 11:2909-2917(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last sequence update)
05-JUJ-2004 (Rel. 44, Last annotation update)
Serine/threonine-protein kinase KKIALRE (EC 2.7.1.37) (Cyclindependent kinase-like 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358 A.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL, X66358; CAA47002.1; -.
EMBL, X66359; CAA47002.1; JOINED.
HR; S23383; S23383.
HSSP; P24941; 1H00.
Genew; HGNC:1781; CDKL1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNEGRNRRRQ 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 DKPTŘKTLŘÝ 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=CDKL1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KKIA HUMAN
                                                                                                                                                                              61
                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                           240
```

RESULT 5

KKIA HUMAN

ID KKIA HUMAN

DT 01-APR
DT 01-APR
DE Serine,

DE Serine,

DE Serine,

DE Serine

CO Nammall.

OC BURATY

OC MAMMAll.

RA MAPATOW

RA MAPATOW

RA MAPATOW

RA MAPATOW

RA MAPATOW

RA MAPATOW

RA MAPATOW

RA MAPATOW

RA MAPATOW

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1- CA.

CC -1

```
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORFNames=CG7236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENMV90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9VMN3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENIMA60
SOM
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY STANDARY S
                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                           196
                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                          PNLVNLJEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 EPEDMETLEEKFSD---VHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSF--QEAQIK 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257 VPPTLETLEAKMPSRTLANPLMMDFLKKCLDKDPAKRWSCERLATHPYFEDYITKQKEIE 316
                                                                                                                              09
                                                                                                                                                                        9/
                                                                                                                                                     137 GCLHRDIKPENILLTAQGQVKLCDFGFARMLSPGENYTDYVATRWYRAPELLVGDTQYGT
                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Nematoda, Chromadorea, Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WormPep; Y42A5A.4; CE20258.

GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0004674; F:protein serine/threonine kinase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
GO; GO:0006468; P:protein amino acid phosphorylation; IEA.
InterPro; IPR011009; Kinase like.
InterPro; IPR000719; Prot kinase.
InterPro; IPR008271; Ser Lhr pkinase.
InterPro; IPR008271; Ser Lhr pkinase.
ProDom; PD000001; Prot_kinase; 1.
SMART; SM00220; S_TKC; 1.
                                                                                     Š,
                                           DB 2; Length 367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome sequence of the nematode C.elegans: A platform for
                                                                                     67; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Steward C.A.;
Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.
42402 MW; F23BDB4C5D28A5E8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                       62.3%; Score 1035.5; DB 358.1%; Pred. No. 3.2e-65; tive 62; Mismatches 67,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           353 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00107; PROTEIN KINASE ATP; 1. PROSITE; PS50011; PROTEIN KINASE DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-2000 (TrEMBLrel. 13, Created) 01-MAY-2000 (TrEMBLrel. 13, Last seq. 01-MAR-2004 (TrEMBLrel. 26, Last annowable thypothetical protein Y42A5A.4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        296 RKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          317 QTITLEQKQTGTRELKPKTS 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=Bristol N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  investigating biology.";
Science 282:2012-2018(1998)
                                                           Best Local Similarity 58.18
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans.
367 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN-Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=6239;
                                                                                                                                                                                                                      61
SEQUENCE
                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9U2H1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                        셤
                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

```
MEDLINE=20196006; PubMed=10731132; DOI=10.1126/science.287.5461.2185; Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amaratides P.G., Scherer S.E., Lib P.W., Hooskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Bardon R.C., Rogers Y.H., Blazel R.G., Champe M., Pfeiffer B.D., Mandon K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Gabor G.L., Abril J.F., Agbayani A., An H.J., Andrews-Pfannkoch C., Baldwin D., Bendon R.Y., Bennos P.V., Berman B.P., Bhandari D., Boshakov S., Benson R.Y., Bence P.V., Berman B.P., Bhandari D., Boshakov S., Berkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Abrits K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I., Achery J.M., Cawley S., Dahlke C., Davemport L.B., Davies P., Achery J.M., Cawley S., Dahlke C., Davemport L.B., Davies P., Aboson K., Doup L.E., Downes M., Dudan-Roods S., Dunkov B.C., Dunn P., Durbin K.J. Evangelista C.C., Ferraz C., Ferriera S., Pleischmann W., Rosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., Houck J., Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., Hostin D., Hostin D., Houston K.A., Howland T.J., Wei M.H., Ibegwam C., Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Lisi Y., Lia Y., Lia Z., Liang Y., Lin X., Li X., Liang Y., Lin X., Li X., Liang Y., Lin X., Li X., Liang Y., Lin X., Li X., Liang Y., Lin X., Li X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Lin X., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Liang Y., Li
                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 EPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARN 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MDKYDRLSKLGEGSYGVVYKCKNRDTGQIVAIKKFVETEDDPHIKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 SVDIWAIGCVFAELLTGOPLWPGKSDVDQLYLIRTLGKLIPRHOSIFKSNGFFHGISIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 PVDIWAVGCVYAELLIGEALWPGRSDIDQLYHIRKTLGEFLPRHISIFRTNQFFFGLSIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                           DB 2; Length 353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila melanogaster (Fruit fly).
Bukaryota, Metazoa, Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                 Query Match 61.8%; Score 1027.5; DB 2; Length: Best Local Similarity 58.8%; Pred. No. 1.1e-64; Matches 187; Conservative 59; Mismatches 63; Indels
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN 1.
ATP-binding; Hypothetical protein; Kinase; Transferase.
SEQUENCE 353 AA; 40665 MW; 7E32260D9849CAC9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              392 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000 (TrEMBLrel. 13, Created) 01-WAY-2000 (TrEMBLrel. 13, Last seqn 01-WAR-2004 (TrEMBLrel. 26, Last ann CG7236-PA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 EG----RNRRRQQVLPL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       297 ESTPTGLTSKRSPNYLPL 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
```

```
RESULT 9
                                                                                                                                                                                            셤
                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                    Mount S.M., Moy M., Murphy B., Murphy L., Muzner D.M., Nelson D.L., Nelson D.L., Nelson D.L., Nelson D.L., Nelson D.L., Nelson D.M., Nelson D.M., Nelson D.M., Nelson D.M., Paltzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Reinert K., Remington K., Sanders R.D., Scheeler F., Shen H., Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T., Spier B., Spradling A.C., Stapleton M., Skupski M.P., Smith T., Spier B., Spradling A.C., Turner R., Venter E., Wang A.H., Wang X., Wang Z.Y., Wassarman D.A., Weinstock G.M., Weissenbach J., Williams S.M., Woodager, Worley K.C., Wu D., Yang S., Yao Q.A., Ye J., Zheng K.H., Zhong W., Zhang G., Zhao Q., Zhang G., Zhang G., Zhang M., Zhang K., Wenser E.W., Rubin G.M., Venter J.C.;

"The genome sequence of Drosophila melanogaster.",
                                                                                                                                                                                                                                                                                                                                                                                                                                            Celliker S.E., Wheeler D.A., Kronmiller B., Carlson J.W., Halpern A., Patel S., Adams M., Champe M., Dugan S.P., Frise E., Hodgson A., George R.A., Hoskins R.A., Laverty T., Muzny D.M., Nelson C.R., Pacleb J.M., Park S., Frieter B.D., Richards S., Sodergren E.J., Svirskas R., Tabor P.E., Wan K., Stapleton M., Sutton G.G., Venter C., Weinstock G., Scherer S.E., Myers E.W., Gibbs R.A., Rubin G.M., Finishing a whole-genome shotgun: Release 3 of the Drosophila melanogaster euchromatic genome sequence."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kaminker J.S., Bergman C.M., Kronmiller B., Carlson J., Svirskas R., Patel S., Frise E., Wheeler D.A., Lewis S.E., Rubin G.M., Ashburner M., Celniker S.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-22426069; PubMed=12537572;
Mistra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S., Mistadecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.E., Smith C.D., Tupy J.L., Whitfied E.J., Bayraktaroglu L., Berman B.P. Bettencourt B.R., Celniker S.E., de Grey A.D., Drysdale R.A., Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q., Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Annotation of the Drosophila melanogaster euchromatic genome: a
Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; AE003611; AAF52279.1; -.
HSSP; P24941; 101Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44962 MW; C9627D077784E55D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FlyBase, FBGT0031730, CG7236.

GO: 0000910; P:cytokinesis; IMP.
InterPro; IPR011009; Kinase like.
InterPro; IPR00119; Prot kīnase.
InterPro; IPR002290; Ser_thr_pkinase.
InterPro; IPR008271; Ser_thr_pkinase.
InterPro; IPR008271; Ser_thr_pkin_AS.
Pfam; PR00069; Pkinase; I.
PR051TE; PS00107; PROTEIN KINASE ATP; I.
PR051TE; PS00108; PROTEIN KINASE DOM; I.
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN I.
PROFILE PEDINGING; KINASE ST; UNKNOWN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Biol. 3: RESEARCH0084-RESEARCH0084 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genome Biol. 3:RESEARCH0083-RESEARCH0083(2002)
                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=22426065; PubMed=12537568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=22426070; PubMed=12537573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genomics perspective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 systematic review
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intAct; 09VMN3;
```

```
61 PNLVNLIEVFRRKRKNWHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                      61 PNLVSLLEVPRRKRRLHLVFEFCELTVLHELERHPQGCPEHLTKQICYQTLLGVAYCHKQ 120
                                                                                                                                                                                                                                                                                                                       SVDIWAIGCVFABILITGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISIP 240
                                                                                                                                                                                                                                                                                                                                                                                                                        241 EPEDMETLEEKF---SDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSF--QEAQIK 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 VPPTLEPLEDKWPAKSQQNPLTIDFLKKCLDKDPTKRWSCEKLTKHSYFDDYIAKQRELE 300
                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                        121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLYGDTQYGS
                                                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels 15; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00220; S.TKC; 1.

PROSITE; PS00107; PROTEIN KINASE ATP; 1.

PROSITE; PS001107; PROTEIN KINASE DOM; 1.

PROSITE; PS001108; PROTEIN KINASE ST; 1.

ATP-binding; Kinase; Sexine/threonine-protein kinase; Transferase.

SEQUENCE 566 AA; 64052 MW; 5D57595550902EA9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0004674; F:protein serine/threonine kinase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
GO; GO:0006468; P:protein amino acid phosphorylation; IEA.
InterPro; IPR011009; Kinase_like.
            Length 392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 566;
                                                        61; Indels
          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 58.2%; Score 967.5; DB 2; Best Local Similarity 54.6%; Pred. No. 3.3e-60; Matches 177; Conservative 67; Mismatches 65;
                                 .3e-64;
     61.8%; Score 1027.5;
58.4%; Pred. No. 1.3e
iive 65; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000719; Prot kinase.
InterPro; IPR00229; Ser thr pkinase.
InterPro; IPR008271; Ser thr pkin AS.
Pfan; PF00069; Pkinase; I.
ProDom; PD000001; Prot kinase; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296 RKARNEGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 HVNSLEAANLROOOL 315
                                             Matches 184; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ser/Thr kinase KKIAMRE
                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Brain;
Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9TTK0
Q9TTK0;
```

~

윱

쉽 ે В δ 원 δ 음

ઠે

ద

ð

```
IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , 9e-58;
nes 69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.6%; Score 941.5;
53.1%; Pred. No. 1.9e
:ive 68; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                       01-FEB-1997 (TrEMBLrel. 02, 01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                01-FEB-1997 (TrEMBLrel. 02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P56 KKIAMRE protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 53.1
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                     · PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=KKIAMRE;
                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                   092772
                                                                                                                                                                                                                                                                                                                        RESULT 11
                                                                                                                             g
                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                              SO OR BERNARY SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                        d.
                                                                                               ò
                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                         121 NIHRDIKPENILVSQSGVVKLCDFGFARTLAAPGEVYTDYVATRWYRAPELLVGDVKYG 180
                                                                                                                                                                                                                                                                     241 PEIKESEPLERRYPKLSEVVIDLAKKCLHVDPDKRPFCAELLHHDFPQMDGFAERFSQEL 300
                                                  61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                             121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYIDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                            180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                            240 PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIHN 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
1 MEKYENLGLVGEGSYGMVMKCRNKDSGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKJALREIRMLKQLKHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=15343333; DOI=10.1038/nature02709;
Seo H.C., Edvardsen R.B., Maeland A.D., Bjordal M., Jensen M.F.,
Hansen A., Flaat M., Weissenbach J., Lehrach H., Wincker P.,
Reinhardt R., Chourrout D.;
"Hox cluster disintegration with persistent anteroposterior order
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57.6%; Score 958; DB 2; Length 385; 57.9%; Pred. No. 1e-59; ive 58; Mismatches 62; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oikopleura dioica.
Eukaryota, Metazoa, Chordata, Urochordata, Appendicularia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                385 AA; 45512 MW; 059F814421A6ADA1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Cyclin-dependent kinase-like 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               385 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AY49962; AAS21447.1; -... GO; GO:0016301; F:kinase activity; IEA. InterPro; IPR011009; Kinase like. InterPro; IPR000719; Prot kinase. InterPro; IPR002290; Ser thr pkinase. InterPro; IPR008271; Ser thr pkinase. InterPro; IPR001245; Tyr pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                         QIK--RKARN-----EGRNRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |:| : ||| : ||QMKVQKDARNISLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression in Oikopleura dioica.";
Nature 431:67-71(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00069; Pkinase; I.
ProDom; PD000001; Prot kinase; I.
SMART; SM00220; S_TKC; I.
SMART; SM00219; TYrKC; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 5.... Matches 168; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Olkopleuridae, Olkopleura.
NCBI_TaxID=34765;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORFNames=006-03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cyclin; Kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                         293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEOUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
```

엄

ò g

ઠ

```
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 ENLVNLLEVCKKKKRWYLVFEFVDHTILDDLELFPNGLDYQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 SSVDIWAIGCVFABILITGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          || :: | || :: : | |: | || :: || || PEIKEREPLERRYPKLSEVVIDLAKKCLHIDPDKRPFCAELLHHDFFQMDGFAERFSQEL 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF--DSF----QEA 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHG--ISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=97152547; PubMed=9000130;

A Taglienti C.A., Wysk M., Davis R.J.;

Taglienti C.A., Wysk M., Davis R.J.;

Taglienti C.A., Wysk M., Davis R.J.;

Taglienti C.A., Wysk M., Davis R.J.;

"Molecular coloning of the epidermal growth factor-stimulated protein kinase p56 KKIAMRE.";

Oncogene 13:2563-2574(1996).

L Oncogene 13:2563-2574(1996).

EMBL; U3546; AASC 0018.1; -..

EMBL; U3546; AASC 0018.1; -..

R Genew, HGNC:1782; CDKL2.

R GO:0004672; F:protein kinase activity; TAS.

GO:0004672; F:protein kinase activity; TAS.

GO:00004672; F:protein kinase activity; TAS.

GO:00004672; F:protein kinase activity; TAS.

R GO:0000165; Protein kinase; 1.

R PROSITE; PS00107; Protein KINASE ATP; 1.

R PROSITE; PS00107; PROTEIN KINASE TAP; 1.

R PROSITE; PS00107; PROTEIN KINASE TAP; 1.

R PROSITE; PS00108; PROTEIN KINASE DOM; 1.

R PROSITE; PS00109; PROTEIN KINASE ST; 1.

R ATP-binding; Kinase; Seriale(threonine-protein kinase; Transferase.)

SEQUENCE 493 AA; 56018 MW; 5CC20A91CBF89EFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                      PEPEDMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSF 289
                                                                                                                                                                                           244 TSPRERVPIEALYPKAPSHTISFLKNCLQMDPTWRLDCVELLDHAYFDRY 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Length 493;
```

α

```
RESULT 13
                        090UK0
                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PNLVNLIEVFRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 PEPEDMET--LEEKFSDVHPVALNFMKGCLKANPDDRLTCSQLLESSYF--DSF----Q
                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SASSA T., Gomi H. 1999 to the EMBL/Genbank/DDBJ databases

L. Submitted (UNW-1999) to the EMBL/Genbank/DDBJ databases

- SIMILARITY: Belongs to the Ser/Thr protein kinase family.

EMBL; ABOS9066; BAA88428.1; -.

RASP; P24941; 1040.

RAD; MG1:RBS227; Cdk12.

RG0; G0:0005524; F:protein serine/threenine kinase activity; IEA.

GO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

GO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

RO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

RO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

RO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

RO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

RO; G0:0016740; F:protein serine/threenine kinase activity; IEA.

RO; G0:0016740; F:protein serine/threenine kinase.

InterPro; IPR000290; Ser_thr pkinase.

RITHERPRO; PR000001; Prote kinase; 1.

RAMART; SM00220; S TKC; 1.
                                                                                                                                                                                                  Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00220; S_TKC; 1.

PROSITE; PS00107; PROTEIN KINASE_ATP; 1.

PROSITE; PS500119; PROTEIN KINASE_DOM; 1.

PROSITE; PS001108; PROTEIN KINASE_ST; 1.

ATP-binding; Kinase; Serine/threonine-protein kinase; Transferase.

SEQUENCE 564 AA; 63640 MW; DACDEF630CCE82D5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.0%; Score 930.5; DB 2; Length 564; 53.4%; Pred. No. 1.3e-57; ive 66; Mismatches 69; Indels 17,
                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | |:| : ||| : ||| ELQLKIEKDARNNSLPKKSQNRKKEK 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      291 EAQIK--RKARN-----EGRNRRRQQ 309
                  301 QLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                           Created)
                                                                                                                                                             Ser/Thr kinase KKIAMRE-gamma
                                                                                                                    01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13, 01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                        Name=Cdkl2; Synonyms=Kkm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 53.4%
Matches 174; Conservative
                                                                                             PRELIMINARY;
                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                NCBI_TaxID=10090;
ð
                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240 PEPEDMET--LEEKFSDVHPVALNFMKGCLKWNPDDRLTCSQLLESSYF--DSF----Q 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Probon; PD000001; Proc kinase; 1.
SWART; SM00220; S_TKC; 1.
SWART; SM00220; S_TKC; 1.
PROSITE; PS00101; PROTEIN KINASE ATP; 1.
PROSITE; PS00118; PROTEIN KINASE DOM; 1.
PROSITE; PS00118; PROTEIN KINASE ST; 1.
ATP-binding; Kinase; Serine/threonine-protein Kinase; Transferase.
SEQUENCE 568 AA; 64055 WW; A43B75E2E9EB86C4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:1858227; CGkl2.

GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:00046740; F:protein serine/threonine kinase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
InterPro: IPR011009; Kinase like.
InterPro: IPR000719; Fort Kinase.
InterPro: IPR002290; Ser thr_pkinase.
InterPro: IPR00691; Ser thr_pkinase.
Pfam; PF00069; Pkinase; I.
                                                                                                                                                                                                                                                                                                                        STRAIN=129/SvJ, and C57BL/6; TISSUE=Brain; Sassa T., Gomi H., Sun W., Ikeda T., Thompson R.F., Itohara S.; Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56.0%; Score 930.5; DB 2; Length 53.4%; Pred. No. 1.4e-57; ative 66; Mismatches 69; Indels
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL kinase KKIAMRE (Ser/Thr kinase KKIAMRE-beta)
Name=Cdkl2; Synonyms=Kkm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EAQIK--RKARN-----EGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | |:| : ||| : ||SELOLKIEKDARNNSLPKKSONRKKEK 326
                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AB029073; BAA88439.1; --
EMBL; AB029068; BAA88439.1; JOINED.
EMBL; AB029070; BAA88439.1; JOINED.
EMBL; AB029070; BAA88439.1; JOINED.
EMBL; AB029071; BAA88439.1; JOINED.
EMBL; AB029071; BAA88439.1; JOINED.
EMBL; AB029065; BAA88427.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 53.4%
Matches 174; Conservative
                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P24941; 10IQ.
                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     291
```

Euteleostomi;

090Y11

ACCUPATION OF THE PROPERTY OF

RESULT 14

```
AEROLANCE TROWN N.A.

TISSUB-Kidney;

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

REDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

REDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RELIABRER R.E., Colling F.S., Wagner L., Schaefer C.F., Bhat N.K.,

RAIschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,

Diatchenco L., Marusina K.R., Farmer A.A., Rubin G.M., Hong L.,

Raba Stapleton M.J. Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.A., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Robar S.A., McEwan P.J., McKernan K.J., Lu X., Galbbs R.A.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rakeeley R.W., Touchman J.W., Green B.D., Dickson M.C.,

Raywinski M.I., Skalska U., Smallus D.E., Schnerch J. Schein J.E.,

M. Modriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Raywinski M.I., Skalska U., Smallus D.E., Schnerch A., Schein J.E.,

M. Modriguez M.M., Mark M.A., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., P. M., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A Klein S., Gerhard D.S.;

Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

-:- SIMILARITY: Belongs to the Ser/Thr protein kinase family.

EMBL: BC074112; AANT4132.1: --

R GO; GO:00064614; F:Protein serine/Chreonine kinase activity; IEA.

R GO; GO:0004713; F:protein serine/Chreonine kinase activity; IEA.

R GO; GO:0006404; F:protein serine/Chreonine kinase activity; IEA.

R GO; GO:0006409; F:protein amino acid phosphorylation; IEA.

R InterPro; IPR010719; Prote kinase.

R InterPro; IPR00229; Ser thr_pkinase.

R InterPro; IPR00229; Ser thr_pkinase.

R InterPro; IPR00125; Tyr_pkinase.

R Pfam; PF00069; Pkinase; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Probom; PD000001; Prot kinase; 1.
SMART; SM00219; TyrKc; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE DOM; 1.
ATP-binding; Kinase; Serine/threonine-protein kinase; Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
TISSUB-Kidney;
MEDLINE-22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                               05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
LCC443693 protein (Fragment).
Name=LOC443693;
Xenopus laevis (African clawed frog).
Eukaryota, Merazoa; Chordata; Craniata; Vertebrata; Euteleostc Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37063 MW; 4CD2189603F9115F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 924;
                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dev. Dyn. 225:384-391(2002).
                                                                                                                                                                                                                                                         Kenopodinae, Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   320 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                          NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             initiative."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
61 ENLVNLLEVCKKKKRRWYLVPEFVDHTILDDLKLFPNGLDYQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 KAVDIWAIGCLVIEMLMGQPLFPGESDIDQLHHIMTCLGNLIFRHQELFYKNPVFAGVRL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SASSA T., GOMIN H., SUN W., IXEGA T., Thompson R.F., Itohara S.;
SUBMITTED (JUN1999) to the EMBL/Genbank/DBBJ databases.

L. SIMILARITY: Belongs to the Ser/Thr protein kinase family.

EMBL; AB020967; BAA88429.1; -.

REMBL; AB020967; BAA88429.1; -.

REMBL; AB020967; BAA88429.1; -.

REMBL; AB020967; BAA88429.1; -.

ROJ GO:000524; F:Protein serine/threonine kinase activity; IEA.

GO; GO:0005740; F:protein serine/threonine kinase activity; IEA.

GO; GO:00064674; F:protein amino acid phosphorylation; IEA.

ROJ GO:0006469; F:protein amino acid phosphorylation; IEA.

ROJ GO:0006469; P:protein amino acid phosphorylation; IEA.

INTERPRO; IPR00179; For thinase.

INTERPRO; IPR002290; Kinase.

INTERPRO; IPR00001; Frot kinase.

INTERPRO; PR000001; Frot kinase.

R PROSITE; PS00010; PROTEIN KINASE ATP; 1.

R PROSITE; PS000109; PROTEIN KINASE ATP; 1.

R PROSITE; PS000109; PROTEIN KINASE DOM; 1.

R PROSITE; PS000109; PROTEIN KINASE ST; 1.

N ATP-Dinding; Kinase; Serime/threonine-protein kinase; Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MEKYENLGLVGEGSYGWVMKCRNKDSGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEPEDMET -- LEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYF -- DSF ----Q
                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 329;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    329 AA; 38023 MW; F72EB89E65AE8585 CRC64;
                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.8%; Score 928; DB 2;
53.9%; Pred. No. 1.1e-57;
iive 63; Mismatches 73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              320 AA.
                                                                                                                                  01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequen
01-OCT-2003 (TrEMBLrel. 25, Last annota
ser/Thr kinase KKIAMRE-delta (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EAQIK--RKARNEGRNRRRQQ 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | |:| : |||
ELQLKIEKDARNNSLPKKSQK 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 53.9% les 173; Conservative
                                                                                                                                                                                                                                                Name=Cdkl2; Synonyms=Kkm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
```

Query Match

ò 셤 8 g Š g ઠે 셤

OGGMD6 RESULT 15 Q6GMD6 ID Q6GMD

```
61 PNLVNLIEVFRRKRKRKHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                  121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                  180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLGKLIPRHQSIFKSNGFFHGISI 239
                                                                                                                                                                                                 PEPEDMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYF--DSFQE---AQI 294
                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                    6; Gaps
Best Local Similarity 53.8%; Pred. No. 2.1e-57;
Matches 169; Conservative 64; Mismatches 75; Indels
                                                                                                                                                                                                                                                                                 KRKARNEGRNRRRQ 308
                                                                                                                                                                                                                                                                                               : | :| :: |
301 RAKLQNLSKDNSSQ 314
                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                295
                                                          g
                                                                                                          qq
                                      ò
                                                                                    ò
                                                                                                                                    ò
                                                                                                                                                          g
                                                                                                                                                                                  ઠ
                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                ò
```

Search completed: April 22, 2005, 06:50:40 Job time : 83.7946 secs

```
5.1.6
Compugen Ltd.
  version - 2005 (
 GenCore
Copyright (c) 1993
```

16
шoq
8
using
search,
protein
1
protein
Σ

April 22, 2005, 01:23:15 ; Search time 96.4471 Seconds (without alignments) 1391.497 Million cell updates/sec Run on:

1 MEKYEKLAKTGEGSYGVVFK......RKARNEGRNRRRQQVLPLKS 347 US-10-766-691-10 1820 Title: Perfect score:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table: Sequence:

2105692 segs, 386760381 residues Searched:

2105692 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

A Geneseq 16Dec04:\* 1: geneseqp1980s:\* geneseqp1990s:\* geneseqp2000s:\* Database

geneseqp2003as:\* geneseqp2003bs:\* geneseqp2001s:\* geneseqp2002s:\* geneseqp2004s:\* Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

	;	kin	_	kin	kin	kin	pro	pro	_	pol		kin	pro	MAR	phil	MDD	t KK	162	uro	pro				kin	los	RE d
	on	Human	Human	Human	Human	Human	Human	Novel	Mouse	Human	Human	Human	Novel pro	Human	Drosophi]	Human MDD	Rabbit	Human	Human	Human	Human	Human	Human	Human	Human	NKIAMRE d
	Description	Aae00494	Aae00491	Aae00495	Aae19152	Aae00492	Aau03525	Aab65643	Adi29250	Abp62954	Ado01538	Aag78547		Adi29249	Abb63118	Abu11689	Aay90724	Adc77659	Adq89156	Abp96087	Adi40875	Aae00490	Aae00493	Adk71868	Aay70126	Adi57233
	1																									
	1	34	11	35	25	32	25	13	0.0	4.	88	1.1	12	61	81	39	24	69	99	37	75	06	93	58	92	33
	a	AAE00494	AAE00491	AAE00495	AAE19152	AAE00492	AAU03525	AAB65643	ADI29250	ABP62954	ADO01538	AAG78547	AAB65642	ADI 29249	ABB63118	ABU11689	AAY90724	ADC77659	ADQ89156	ABP96087	ADI40875	AAE00490	AAE00493	ADK71868	AAY70126	AD15723
	B	4	4	4	ស	4	4	4	8	S	8	ß	4	8	4	9	e	7	œ	9	ω	4	4	ω	ო	8
	Match Length DB	347	356	315	342	324	360	296	296	358	358	228	247	247	392	197	266	493	493	362	183	187	198	205	455	455
	Match	100.0	98.7	89.9	88.6	88.6	87.5	8.69	69.8	63.9	63.6	62.3	61.7	61.7	55.0	52.1	51.7	50.3	50.3	50.1	45.6	43.5	43.5	43.5	41.7	41.7
	Score	1820	1796	1636	1613	1612	1593	1270.5	1270.5	1162.5	1157.5	1134	1123	1123	1001.5	948	941.5	915.5	915.5	911.5	829.5	791	791	791	758.5	758.5
11.000	No.	-	8	٣	4	Ŋ	φ	7	60	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

455 8 ADI57214 455 4 ADI67236 451 4 ADI67236 452 4 AAV0125 555 3 AAX70124 154 6 ABM83922 534 4 AAB65645 534 4 AAB65645 305 7 ADI78200 305 7 ADI78200 305 8 ADI57200 305 8 ADI57200 305 8 ADI57200 305 8 ADI57200 305 8 ADI57200 306 8 ADI57200 307 ADM85028 308 4 AAM89568 544 2 AAW85689 548 2 AAW851390	Adi57214 Human NKI Adi57236 CDK3 domi Aau03524 Human pro Aav70125 Rat lost			Adf45039 Human Kin Adj68738 Human hea Adi57200 Human CDK Adi57237 CDK3 domi		Aaw95689 Homo sapı Aaw85029 Green flu Add21390 Human cyc
8 8 4 6 6 9 8 4 8 4 7 7 7 8 8 4 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	ADI57214 ADI57236 AAU03524 AAY70155	AAY70124 ABU05290 ABM83922	AAB65645 AD129252 ABG06142	ADF45039 ADJ68738 ADI57200 ADI57237	AAM39276 AAW85028 AAM41062	AAW95689 AAW85029 ADD21390
	25 25 30 31 31 44	6243	34 24 48 48 48	05 7 05 8 05 8	543	98 7 98 7
	41.7 41.7	39.5	36.6 31.3	31.0 31.0 31.0	30.0	30.6
44444400000000000000000000000000000000	758.5 758.5 758.5	737.5	666 666 569	265 565 565 565 565 565 565 565 565 565	565 563 558	557 557 556
	25 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	30 30	33 34 35	36 38 39	4 4 4 0 1 2	44 4 5 5

## ALIGNMENTS

AAE00494 standard; protein; 347 AA (first entry) Human kinase #5. 19-JUN-2001 AAE00494; AAE00494 

Human; kinase; gene therapy; bioreactor; mental disorder; biological disorder.

Homo sapiens.

WO200123579-A1. 05-APR-2001. 27-SEP-2000; 2000WO-US026621. 28-SEP-1999; 99US-0156511P. (LEXI-) LEXICON GENETICS INC.

Friedrich G, Nehls M, Turner CA, Donoho G, Sands AT;

B,

Zambrowicz

WPI; 2001-266166/27. N-PSDB; AAD03816.

New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.

Claim 2; Page 32-33; 38pp; English.

The present sequence is novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nuclectide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical

```
probes are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PNLVNLIEVFRKKKKMHLVFEYCDHTLINELERNPNGVADGVIKSVIMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                  PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                         VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                            MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA
                                                                                                                                                                                                                                                                             MEKY EKLAKTGEGSYGVV FKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                     NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                Gaps
     The labelled NHP
                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                              Length 347;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
     are used as probes.
                                                                                                                                                                                                        100.0%; Score 1820; DB 4;
100.0%; Pred. No. 1.6e-186;
ive 0; Mismatches 0;
 NHP oligonucleotides
                                                                                                                                                                                                     Query Match
Best Local Similarity 100.
Matches 347; Conservative
                                                                                                                                                                          Sequence 347 AA;
 disorders.
                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
8888888888888888
                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
Human; kinase; gene therapy; bioreactor; mental disorder;
                                   AAE00491 standard; protein; 356 AA
                                                                                                            (first entry)
                                                                                                                                                                                                        biological disorder
                                                                                                                                               Human kinase #2
                                                                                                            19-JUN-2001
                                                                      AAE00491;
RESULT 2
                 AAE00491
```

27-SEP-2000; 2000WO-US026621. 99US-0156511P (LEXI-) LEXICON GENETICS INC WO2001235.79-A1 28-SEP-1999; Homo sapiens 05-APR-2001 

New isolated human kinase polynucleotide useful for generating WPI; 2001-266166/27. N-PSDB; AAD03813

Zambrowicz

Friedrich G,

Nehls M,

Turner CA,

Donoho G, Sands AT;

```
The present sequence is novel human protein (NHP) known as human kinase.

The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of muttan human kinase cDNA is useful for the detection of muttan human kinase cDNA is useful for the detection of muttan human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of other cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening numan genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations within the exons, introns and splice sites that can be used in disposites and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the horaw. For the medical of nucreound supply of NHP to the horaw. For the medical in gene the supplement of the products are used in gene that the medical supplement in gene the supplement of the products are used in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in gene that the medical supplement in the medical supplement in the medical supplement in the medical sup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PNEVNLIEVFRKKRKMHLVFEYCDHTLLNBLERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALBEIRMLKOLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PNLVNLIEVFRRKRKMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SVDIWAIGCVFAELLIGOPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.7%; Score 1796; DB 4; Length 3 100.0%; Pred. No. 6.5e-184; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    therapy for the modulation of NHP expression
                                                                                    Disclosure; Page 28-29; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 342; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 356 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

AAE00495 standard; protein; 315 (first entry) Human kinase 19-JUN-2001 AAE00495; BXSXEXEXEX

Ş

AAE00495 RESULT

Human, kinase, gene therapy, bioreactor, mental disorder, biological disorder.

WO200123579-A1. Homo sapiens.

```
The present sequence is novel human protein (NHP) known as human kinase. The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase for the diagnosis of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations perturbing the normal function of NHP in the body. The NHP nucleotide sequences are useful for generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products remained to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are useful for screening human genomic library for identifying polymorphisms and as primers in amplification assays to detect mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          within the exons, introns and splice sites that can be used in diagnostics and pharmacogenomics. Nucleotide construct encoding NHP products are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene
                                                                                                                                                                                                                                                                                                                                   New isolated human kinase polynucleotide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                     Zambrowicz B;
                                                                                                                                                                                                     Nehls M, Friedrich G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               therapy for the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 3; Page 33-34; 38pp; English.
                                                                 27-SEP-2000; 2000WO-US026621.
                                                                                                           99US-0156511P
                                                                                                                                                        (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                     Turner CA,
                                                                                                                                                                                                                                                                      WPI; 2001-266166/27.
                                                                                                                                                                                                                                                                                           N-PSDB; AAD03817
                                                                                                           28-SEP-1999;
                                                                                                                                                                                                     Jonoho G,
                                                                                                                                                                                                                            Sands AT;
```

Sequence 315 AA;

```
PNLVNLIEVFRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                         PNLVNLIEVFRRKRKAHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                             SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                  241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                   89.9%; Score 1636; DB 4; Length 315;
90.8%; Pred. No. 9e-167;
tive 0; Mismatches 0; Indels 32; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MNPDDRLTCSQLLESSYPDSFQEAQIKRKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 315
                                              Conservative
Query Match
Best Local Similarity
                                          Matches 315;
                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                         g
                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                 8
                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                   ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
```

The present invention relates to an isolated human kinase polypeptide (PKIN) or a biologically active/immunogenic fragment of PKIN is useful for diagnosing, treating and preventing cancer (e.g., leukaemia, lymphoma, melanoma), an immune disorder (e.g., acquired immunodeficiency syndrome (AIDS), Addison's disease, allergy, anaemia, asthma, Crohn's cardisease, rheumatorid arthritis), a growth and developmental disorder (e.g., atherosclerosis, hypertension, myocardial infarction), and a lipid disorder (e.g., fatty liver, cholesteasis, caucher's disease, Niemann-Pick's disease). PKIN is useful in a number of drug screening techniques and to analyse the proteome of a tissue or cell type. PKIN is useful for creating Knockin humanised animals or transgenic animals to model human diseases, in somatic or germline gene therapy, to generate a transcript image of a tissue or cell type, for detecting canimals to model human diseases, in somatic or germline gene therapy, center, among normal, carrier or affected individuals, and as hybridisation, ctc., among normal, carrier or affected individuals, and as hybridisation in southern or northern analysis, dot blot or other membrane-based

New human kinase polypeptide, useful in diagnosis, prevention and treatment of cancer, immune disorder, growth and developmental disorder, cardiovascular disorder and lipid disorder.

WPI; 2002-206083/26. N-PSDB; AAD30557.

rang YT,

Claim 1; Page 147-148; 196pp; English

```
Thornton M, Yue H, Khan FA, Gururajan R, Hafalia AJA, Walia NK; Patterson C, Ramkumar J, Gandhi AR, Policky JL, Baughn MR; Tribouley CM, Bandman D, Nguyen DB, Lu Y, Burford N, Lal P, Ding L; Yao MG, Elliott VS, Recipon SA, Kearney L, Lu DAM, Greenwald SR; Tang YT, Xu Y, Walsh RT, Gietzen KJ, Yang J, Hillman JL;
                                                                                                          Human; kinase polypeptide; PKIN-10; gene therapy; Addison's disease; leukaemia; immune disorder; lymphoma; melanoma; developmental disorder; acquired immunodeficiency syndrome; AIDS; allergy; anaemia; hypertension; asthma; Crohn's disease; rheumatoid arthritis; bursitis; atherosclerosis; cirrhosis; hepatitis; psoriasis; Cushing's syndrome; cytostatic; cancer; cholestasis, cardiant; cardiovascular disorder; Niemann-Pick's disease; lipid disorder; fatty liver; Gaucher's disease; myccardial infarction; drug screening; transgenic animal; antiinflammatory; hepatotropic;
                                                                                                                                                                                                                                                                                           /note= "Eukaryotic protein kinase domain"
                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                     Human kinase polypeptide (PKIN-10).
           AAE19152 standard; protein; 342 AA
                                                                                                                                                                                                                  hypotensive; anti-HIV; enzyme.
                                                                                                                                                                                                                                                                                                                                                                                             21-JUL-2000; 2000US-0220038P.
28-JUL-2000; 2000US-0222112P.
04-AUG-2000; 2000US-0222831P.
11-AUG-2000; 2000US-0224729P.
                                                                                                                                                                                                                                                                                                                                                                     20-JUL-2001; 2001WO-US023092
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (INCY-) INCYTE GENOMICS INC.
                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (THOR/) THORNTON M.
                                                                                                                                                                                                                                                                                                                    WO200208399-A2
                                                                                                                                                                                                                                           Homo sapiens
                                                           21-MAY-2002
                                                                                                                                                                                                                                                                                                                                             31-JAN-2002
                                                                                                                                                                                                                                                                    Key
Domain
AAE19152
```

4

```
New isolated human kinase polynuclectide useful for generating antibodies, as reagents in diagnostic assays and for screening for compounds useful for treating mental, biological or medical diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 30; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-266166/27.
                             Sequence 342 AA;
                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAD03814.
                                                                                                                                                                                                                                                         Human kinase #3
                                                                                                                                                                                                                                                                                                WO200123579-A1.
                                                                                                                                                                                                                                                                                                                                  28-SEP-1999;
                                                                                                                                                                                                                                              19-JUN-2001
                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                           05-APR-2001
                                                                                                                                                                                                                                                                                                                                                        Donoho G,
Sands AT;
                                                                                     61
                                                                                                           121
                                                                                                                                  181
                                                                                                                                             181
                                                                                                                                                                    218
                                                                                                                                                                               301
                                                                                                                                                                                           269
                                                                                                                                                                                                                                  AAE00492;
                                                                                                                                                                                                           RESULT 5
886668
                                                                                                                                                                                                                      d
                                                                                    ò
                                                                                              g
                                                                                                           ò
                                                                                                                    g
                                                                                                                                 ò
                                                                                                                                            쉱
                                                                                                                                                                  g
                                                                                                                                                                               ò
                                                                                                                                                                                         셤
                                                                                                                                                        ò
```

```
The present sequence is novel human protein (NHP) known as human kinase.

The human kinases share structural similarity with animal kinases, more particularly serine or threonine protein kinases. Human kinase cDNA is useful for the detection of mutant human kinase cDNA is useful for the detection of symptomatic or phenotypic manifestations of disease, and also as a therapeutic. It is useful for screening drugs effective in the treatment of symptomatic or phenotypic manifestations of effective in the treatment of symptomatic or phenotypic manifestations of perturbing the normal function of MHP in the body. The NHP nucleotide sequences are useful for generation of onther cellular gene products related to human kinases, and as reagents in assays for screening compounds that are useful for treating mental, biological or medical disorders. NHP oligonucleotides are used as probes. The labelled NHP probes are useful for screening human genomic library for identifying compounds that are useful for screening human genomic library for identifying compounds are used as probes. The labelled NHP probes are used to genetically engineer cells in vivo that functions as bioreactors in the body delivering a continuous supply of NHP to the body. Nucleotide construct encoding NHP succeators in the body delivering a continuous supply of NHP to the body. Nucleotide constructs encoding functional NHPs are used in gene body. Nucleotide constructs encoding necessary to the modulation of NHP expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218 ------GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKTALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human, protein kinase, PTK; STK; cancer; cardiovascular disease; metabolic disorder; immune related disease; neurological disorder; neurodegenerative disorder; inflammatory disorder; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     269 MNPDDRLTCSQLLESSYFDSFQEAQIKRARNEGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 SVDIWAIGCVFAELLTGOPLWPGKSDVDOLYLIRTL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1612; DB 4;
Pred. No. 3.6e-164;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU03525 standard; protein; 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 88.6%;
Best Local Similarity 90.6%;
Matches 310; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human protein kinase #25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          reproductive disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 324 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU03525;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
AAU03525
            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                       61 PNLVNLIEVFRRKRKMHLVFEYCDHTLINELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----GKLIPRHQSIPKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                      9
technologies, in PCR technologies, in dipstick, pin, multiformat enzyme linked immunosorbent (ELISA)-like assays and in microarrays utilising fluids or tissues from patients to detect altered PKIN expression. The present sequence is human PKIN-10
                                                                                                                                                                                                                                                                                                                                                         PNLVNLIEVFRRKRKRKHHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                          34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 342;
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zambrowicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; kinase; gene therapy; bioreactor; mental disorder;
biological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ--QVLPL
                                                                                                                                                                          Score 1613; DB 5;
Pred. No. 3.1e-164;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIRTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Friedrich G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE00492 standard; protein; 324 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Turner CA, Nehls M,
                                                                                                                                                                  Query Match
Best Local Similarity 89.9%;
Matches 312; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-SEP-2000; 2000WO-US026621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
```

WO200138503-A2

31-MAY-2001.

Gaps

32;

Length 324; Indels

```
standard; protein; 296 AA
                                                                                                           Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loca
Matches
                                                                                                                                                                                                      Mus
 엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                   Anulo301-Anulo350. Fapresent nover numen protein kinases Hi-37. In mover numen protein kinases have been identified as members of the tyrosine or serine/threonine kinases (PTK and STK) families. The polynucleotides cancentry protein kinases and the polypeptides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate kinase expression. For example, they may be used to treat cancers (especially cancers of haematopoietic origin), cardiovascular disease (e.g. atherosclerosis), metabolic disorders (e.g. diabetes), immune related diseases (e.g. heumatoid arthritis), neurological disease (e.g. schizophrenia), neurodegenerative disorders (e.g. diabetes), inflammatory disorders (e.g. asthma), infectious disease (e.g. HIV) and reproductive disorders (e.g. infertility).

Additionally, polynucleotides encoding protein kinases may be used for general the protein kinase polypeptides may be used as antigens in the production of antibodies against the protein kinases and in assays to identify modulators of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Э;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNLVNLIEVFRKKRKRKHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ-- 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           269 KFSDVHPVALNFMKGCLKANPDDRLTCSQLLESSYFDSFQEAQIKRKARNBGRNRRRQQN 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----IPGDAYTDYVA 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 NCIHRDIKPENILITKOGIIKICDFGFAQILSNSHVGRIDLPDLIDAFAVPGDAYTDYVA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL---- 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RHVDQAGLELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEE 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                             The novel
                                                                                                                                                             Nucleic acids encoding human kinase polypeptides, useful for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52; Gaps
                                                                                                                                                                           diagnosing and/or treating e.g. cancer, immune, cardiovascular and
neuronal-associated diseases, and microbial infections.
                                                                                                                                                                                                                                          AAU03501-AAU03557 represent novel human protein kinases #1-57.
                                                                               Martinez R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87.5%; Score 1593; DB 4; Length 360;
85.2%; Pred. No. 4.7e-162;
ive 2; Mismatches 0; Indels 52
                                                                               Sudarsanam S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCIHRDIKPENILITKQGIIKICDFGFAQIL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein kinase expression and activity
                                                                               Manning G,
                                                                                                                                                                                                                   Claim 7; Fig 2; 433pp; English.
22-NOV-2000; 2000WO-US032085
                           99US-0167482P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 85.2
Matches 311; Conservative
                                                                              Whyte D,
Clary D;
                                                                                                                      2001-343950/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  341 QVLPL 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÓLLPL 333
                                                     (SUGE-) SUGEN INC
                                                                                                                                    N-PSDB; AAS06725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 360 AA;
                             24-NOV-1999;
                                                                               Plowman GD,
                                                                                            Flanagan P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         223
 . <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ∂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

RESULT 7 AAB65643

```
The present sequence is a novel protein kinase. The novel protein kinases and the nucleic acids that encode them may be used in the treatment and diagnosis of diseases associated with inappropriate kinase expression such as immune-related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers. The nucleic acids and complementary sequences may also be used as DNA probes in diagnostic assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Diseases related to kinase antibodies and kinase antagonists may also be used to down regulate kinase expression and activity. Diseases related to kinase expression and activity, Diseases related to kinase expression and activity include rheumatorid arthritis, atherosclerosis, autoimmune disorders, complications of organ transplantation, myocardial infarction, immune disorders, cardiomyopathies, strokes, renal failure, oxidative-stress related disorders, chronic inflammatory powel disease, multiple sclerosis, asthma, osteoarthritis, peoriasis, rhinitis, autoimmunity, diabetes, cancers and reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46 KIALREIRMLKQLKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKS 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106 VLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRW 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        166 YRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHV 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59
                                                                                                                                         protein kinase; antiarthritic; antisclerotic; osteopathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic acids encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60 VLWQTLOPICHKHNCIHRDVKPENILITKQGMIKICDFGFARILIPGDAYTDYVATRW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunosuppressive; cardiant; renal; antinflammatory; antiasthmatic; dermatological; antidiabetic; antinfertility; gene therapy; vaccine; immune disorder; cardiovascular disease; neurodegenerative disease; cancer; autoimmune disorder; stroke; inflammatory bowel disease; inflammatory pelvic disease; multiple sclerosis; psoriasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69.8%; Score 1270.5; DB 4
80.5%; Pred. No. 1.8e-127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sudersanam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neurodegenerative diseases and/or cancers.
                                                                    Novel protein kinase, SEQ ID NO: 170.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Whyte D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 10; Fig 1; 310pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-MAY-2000; 2000WO-US014842.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0136503P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plowman GD, Martinez R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-032161/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAF44670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 296 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         40200073469-A2
                                                                                                                                             mouse;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-MAY-1999;
27-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

343

267

207

```
DQAGLELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFS 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a compound comprising a sequence comprising 8-80 base pairs (bp) targeted to a nucleic acid encoding MARK3 (MAP/microtubule affinity-regularing kinase 3), that specifically hybridises with the nucleic acid encoding MARK3 and inhibits expression of MARK3, i.e. is an antisense oligonucleotide (AO). Also included are a composition comprising the compound and a carrier or diluent, inhibiting the expression of MARK3 in cells or tissues, treating an animal having or suspected of having a disease or condition associated with MARK3 and screening for an antisense compound. The antisense oligonucleotide is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful for preparing a composition for treating hyperproliferative disorder, particularly cancer and neurodegenerative diseases e.g. Alzheimer's disease. The present sequence is a MARK3 associated protein included in the figures but not mentioned anywhere else in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating expression of MARK3 or for treating cancer or Alzheimer's disease.
                     -----GKLIPRHQSIFRSNQFFRGISIPEPEDMETLEEKFS
                                                              286 DVHPVALNFMKGCLKOMPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ--QVL
                                                                               MAP/microtubule affinity-regulating kinase 3; cancer; Alzheimer's disease; neurodegenerative disorde; hyperproliferative disorder; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                        MARK3
                                                                                                                                                                                                                                                                                                                                    Mouse MARK3-associated protein #12.
                                                                                                                                                                                                                                       ADI29250 standard; protein; 296 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 170; 233pp;
                                                                                                                                                                                                                                                                                                                                                                        gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dobie KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ward DT, Freier SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004-052188/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; ADI29368
                                                                                                                                                           269
                                                                                                                              PL 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US2003232771-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                      22-APR-2004
                                                                                                                                                             PL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-DEC-2003,
                                                                                                                             344
                              172
                                                                                                                                                           268
                                                                                                                                                                                                                                                                       ADI29250;
                                                                                                                                                                                                         RESULT 8
ADI29250
                                                                                                                                                                                                                                       Dp
                                                                                         셤
ð
                                                            ò
                                                                                                                           ò
```

```
60 VLWQTLQALNFCHKHNCIHRDVKPENILITKQGMIKICDFGFARILIFGDAYTDYVATRW 119
KIALREIRMLKQLKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKS 105
                                                            106 VLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRW 165
                                                                                                                                                                                                                                                           286 DVHPVALNFMKGCLKMNPDDRLITCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ--QVL 343
                                                                                                                                                                                                                                                                              The invention relates to an isolated polynucleotide (I) comprising one of 245 sequences (ABQ93288-ABQ93532). Treating a condition comprising administering to a mammalian subject a composition comprising the protein (II) encoded by (I) (ABP62893-ABP63053) or an antibody (III) to (II). ((II) and (III) are useful for diagnostic evaluation of disorders (I) is useful for gene therapy of diseases and (II) can be used for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; vulnerary; dermatological; neuroprotective; nootropic; cancer; antiparkinsonian; immunostimulant; cytostatic; immunosuppressive; antipalbetic; antiallergic; gene therapy; wound healing; tissue repair; burn; central nervous system disorder; Alzheimer's disease; Parkinson's disease; Huntington's disease; immune disorder; autoimmune disorder; multiple sclerosis; diabetes; allergy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New polynucleotide and polypeptides, useful for treatment and diagnosis of Alzhaimer's, Parkinson's, Huntington's, amylotrophic lateral sclerosis, immune deficiencies, cancer, autoimmune disorders, multiple sclerosis, diabetes and allergies.
                             1 KIALREIRMLK-LKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELBRNPNGVSDGVIKS
                                                                                                                               166 YRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHV
                                                                                                                                               ------GKLIPRHQSIFRSNQFFRGISIPEPEDMETLEEKFS
                                                                                                                                                                                             226 DQAGLELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 20; SEQ ID NO 391; 284pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ren F, Zha!
Wehrman T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhou P, Xue AJ,
u C, Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                           ABP62954 standard; protein; 358 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human polypeptide SEQ ID NO 391.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-AUG-2001; 2001WO-US027093.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-SEP-2000; 2000US-00654935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Asundi V, Zhou
Wang D, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002-583321/62.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; ABQ93433.
                                                                                                                                                                                                                                                                                                                           344 PL 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200218424-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-0CT-2002
                                                                                                                                                                                                                                                                                                                                                        PI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-MAR-2002.
46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABP62954;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang YT,
Zhao QA,
                                                                                                                                                                                                                              172
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
ABP62954
                             셤
                                                                                       g
                                                                                                                                                    g
                                                              Š
                                                                                                                            ò
                                                                                                                                                                                     ò
                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                     Ωp
                                                                                                                                                                                                                                                                                                                                                                                                                                         \delta
                                                                                                                                                                                                                                                                                                                         ò
```

ب ب

Gaps

35;

Query Match

69.8%; Score 1270.5; DB 8; Length 296;
Best Local Similarity 80.5%; Pred. No. 1.8e-127;
Matches 243; Conservative 19; Mismatches 5; Indels 35;

Sequence 296 AA;

```
therapeutic treatment. Diseases that may be treated include wound healing and tissue repair, burns, central nervous system disorders (e.g. Alzheimer's, Parkinson's Hutington's and amylotrophic lateral sclerosis), immune deficiencies, cancer, autoimmune disorders, multiple sclerosis, diabetes and allergies. Note: The sequence data for this patent and not form part of the printed specification, but was obtained in electronic format directly from WIPO at the branch of the printed specification, but was obtained ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human; cyclin-dependent kinase like 1; CDKL1; branching morphogenesis; branching morphogenesis modulator; angiogenic disorder; apoptotic disorder; proliferation disorder; chromosome 14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFWKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vogel AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human cyclin-dependent kinase like 1 (CDKL1) protein SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                  33;
                                                                                                                                                                                                                                                                                                         ; Pred. No. 1e-115; DB 5; Length 358; 42; Mismatches 46: 7-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Habeck HA, Koblizek TI;
Stott GM, Trowe T, Vog
Jin Y, Hai B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPVDVWAIGCVFAELLSGVPLWPGKSDVDQLYLIRKTL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300 KMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNE 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |:||:|||| ||| ||| ||:::|::| || |:
HMDPTERLTCEQLLHHPYFENIREIEDLAKEHNK 303
                                                                                                                                                                                                                                                                                                                                                 63.9%; Score 1162.5; 63.8%; Pred. No. 1e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plowman GD, Karim FD, Swimmer C,
Schulte-Merker S, Langheinrich U,
Odenthal JH, Scheel JK, Will TT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADO01538 standard; protein; 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-OCT-2002; 2002US-0420554P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-OCT-2003; 2003WO-US033483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                               Matches 213; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EXEL-) EXELIXIS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-365563/34.
N-PSDB; ADO01535.
                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                         Sequence 358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004038372-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AD001538;
                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AD001538

IID AD00

XX

XX

XX

XX

DY

YX

XX

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

XX

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Huma

Hu
      8888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
```

```
The present invention describes the use of a cyclin-dependent kinase like I (CDKL1) polypeptide or nucleic acid for modulating branching morphogenesis in a mammalian cell or for diagnosing a disease in a patient. Also described: (1) identifying a candidate branching morphogenesis modulating agent; (2) modulating branching morphogenesis modulating ocntacting the cell with an agent that specifically binds a CDKL1 polypeptide or nucleic acid; and (3) a method for diagnosing a disease in a patient. The CDKL1 polypeptide or nucleic acid is useful for modulating branching morphogenesis in a mammalian cell. It is also useful for diagnosing a disease, e.g. andiogenic, apoptotic or proliferation disorder in a patient. The present sequence represent invention. The human CDKL1 gene is located on chromosome 14, more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLKGCL 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PNIVNLIEVFRRKRKMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antidiabetic; neuroprotective; antiarthritic; dermatological; immunosuppressive; antinflammatory; antithyroid; antipsoriatic; ophthalmological; antiallergic; antiasthmatic; antiathersocleroitc; hypotensive; vasotropic; antiarthythmic; virucide; anorectic; metabolic; immunomodulator; analgesic; cellular proliferative disorder; cancer; acute lymphoblastic leukaemia; Hodgkin's disease;
Use of cyclin-dependent kinase like 1 polypeptides or nucleic acids for modulating branching morphogenesis in a mammalian cell or for diagnosing a disease e.g. angiogenic, apoptotic or proliferation disorder in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cardiovascular disorder; hypertension; coronary artery disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bone metabolism disorder; osteoporosis; immune system disorder;
inflammatory; diabetes mellitus; osteoarthritis; asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein kinase; enzyme; cytostatic; osteopathic; hepatotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63.6%; Score 1157.5; DB 8 64.7%; Pred. No. 3.6e-115; ive 41; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300 KMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human kinase 14257 amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |:| :|||| ||| ||: :| :
HMDPTERLTCEQLLHHPYFENIREIE
                                                                                                   Example; SEQ ID NO 4; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAG78547 standard; protein; 228 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 64.7
Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             specifically to 14q22.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
    444488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
```

ω

us-10-766-691-10.rag

```
161. .218
/note= "kinase transferase protein serine/threonine-
protein ATP-binding II phosphorylation casein alpha chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated 14257 polypeptide and nucleic acid encoding it. The 14257 protein is a protein kinase that acts as a modulating agent in regulating a variety of cellular processes, including cell proliferation, differentiation, growth and division. The activity of the protein of the invention may be described as; cytostatic; osteopathic hepatotropic; antidiabetic; neuroprotective, antiatthitic; osteopathic antipsoriatic; ophthalmological; antialiflammatory, antithyroid; antistensorlerotic; hypotensive; vasotropic; antiarthmatic; virucide; anorectic; metabolic; immunomodulator and analgesic. The protein of the invention may act as a novel diagnostic target or therapeutic agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     controlling certain disorders, for example kinase-associated or other 14257-associated disorders. These may include cellular proliferative disorders such as cancers e.g. acute lymphoblastic leukemia or Hodgkin's disorders include bone metabolism disorders such as osteoporosis, disorders of the immune system, e.g. inflammatory, diabetes mellitus, osteoarthritis and asthma. Proteins of the invention may also be of use as therapeutic agents in cardiovascular disorders such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New 14257 polypeptides (protein kinases), useful as diagnostic targets and therapeutic agents for controlling cellular proliferative and/or differentiative disorder, bone disorders, immune disorders and
                                                                                                                                                                                                                                                                                    /note= "serine/threonine protein kinase active-site
                                                                                                                                                                                                                       "casein kinase II phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                             "casein kinase II phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "casein kinase II phosphorylation site"
                                                                                                                         "tyrosine kinase phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       note= "tyrosine kinase phosphorylation site" 05. .208
                                                                                             /note= "eukaryotic protein kinase domain"
                                                                                                                                                                      .32
:e= "N-myristoylation site"
                                                                                                                                                                                                                                                     'note= "N-myristoylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "N-myristoylation site"
204. .211
                                                                                                                                         .26
:e= "N-glycosylation site"
endothelial cell disorder; psoriasis
                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1c; Fig 1A; 98pp; English.
                                                                                                                                                                                                                                                                                                    signal site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-APR-2001; 2001WO-US012188.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-APR-2000; 2000US-0196910P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                .183
                                                                                                                                                                                                                                                                                                                                                                                              /note= "ca
188. .193
                                                                                                                                                                                                                                      .102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cardiovascular disorders.
                                                                                                                                                                                                                       'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=
                                                                                                                             note=
                                                                                                                                                                                            note=
                                                                                                                                                                                                                                                                                                                                                               domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-034355/04.
N-PSDB; AAI64248.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kapeller-Libermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200179488-A2
                                                                                                          Modified-site
                                                                                                                                       Modified-site
                                                                                                                                                                        Modified-site
                                                                                                                                                                                                     Modified-site
                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                              Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                         Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified-site
                                Homo sapiens
                                                                              Domain
                                                                                                                                                                                                                                                                                                                   Domain
                                                                 Key
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is a novel protein kinase. The novel protein kinases and the mucleic acids that encode them may be used in the treatment and diagnosis of diseases associated with inappropriate kinase expression such as immune-related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers. The nucleic acids and complementary sequences may also be used as DNA probes in diagnostic
as hypertension and coronary artery disease, and some endothelial cell disorders, including psoriasis. The current sequence represents a human kinase 14257 amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; mouse; protein kinase; antiarthritic; antisclerotic; osteopathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids encoding kinase polypeptides, useful for diagnosing and treating immune-related diseases and disorders, cardiovascular disease, neurodegenerative diseases and/or cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                      PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                        NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunosuppressive, cardiant; renal; antinflammatory; antiasthmatic; dermatological; antidiabetic; antinfertility; gene therapy; vaccine; immune disorder; cardiovascular disease; neurodegenerative disease; cancer; autoimmune disorder; stroke; inflammatory bowel disease; inflammatory pelvic disease; multiple sclerosis; psoriasis.
                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                  Length 228;
                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SVDIWAIGCVFAELLIGOPLWPGKSDVDQLYLIRTL 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL 217
                                                                                                                                                                                         Score 1134; DB 5;
Pred. No. 5.9e-113;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sudersanam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel protein kinase, SEQ ID NO: 169.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Whyte D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB65642 standard; protein; 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 10; Fig 1; 310pp; English.
                                                                                                                                                                                            62.3%;
98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-MAY-2000; 2000WO-US014842.
                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plowman GD, Martinez R,
                                                                                                                                                                               Query Match
Best Local Similarity
Matches 213; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-032161/04.
N-PSDB; AAF44669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SUGE-) SUGEN INC.
                                                                                                                              Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200073469-A2
                                                                                                                              Sequence 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB65642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB65642
   2005×8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X S X X S X X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S X S 
                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
```

```
specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABB63118;
                                                                                                                                                                                                                                                                                                                                                                          216
                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                            149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        209
                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABB6311
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
assays. The kinase polypeptides may be used as antigens in the production of antibodies of kinase expression and activity. Anti-kinase antibodies and kinase antagonists may also be used to down regulate kinase expression and activity. Diseases related to kinase expression and activity. Diseases related to kinase expression and disorders, complications of organ transplantation, myocardial infarction, immune disorders, cardiomyopathies, strokes, renal failure, oxidativestress related disorders, chronic inflammatory bowel disease, chronic inflammatory pelvic disease, multiple sclerosis, asthma, osteoarthritis, psoriasis, rhinitis, autoimmunity, diabetes, cancers and reproductive
                                                                                                                                                                                 ~
                                                                                                                                                                                                                                                  215
                                                                                                                                                                                                                                                                                             275
                                                                                                                                                                                                                                                                                                                                          335
                                                                                                                                                                                                                                                              AYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIR 120
                                                                                                                                                                                                                                                                                                                                                     DMETLEEKFSDVHPVALNFWKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGR 208
                                                                                                                                                                                                                                                                                                                    1 NGVADGVIKSVIMQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIFPGD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense compound targeted to a nucleic acid molecule encoding microtubule-affinity-regulating kinases (MARK3), useful for modulating
                                                                                                                                                                                                                                                                                             TLVETGFRHVDQAGLELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPE
                                                                                                                                                                                                                                                                                                                                          276 DMETLEEKFSDVHPVALNFMKGCLKMNPDDRLJTCSQLLESSYFDSFQEAQIKRKARNEGR
                                                                                                                                                                                                      NGVADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGD
                                                                                                                                                                                                                                                   AYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIR
                                                                                                                                                                                34; Gaps
                                                                                                                                                        Score 1123; DB 4; Length 247;
Pred. No. 1e-111;
1; Mismatches 0; Indels 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAP/microtubule affinity-regulating kinase 3; c. Alzheimer's disease; neurodegenerative disorde;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hyperproliferative disorder; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; antisense gene therapy; MARK3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADI29249 standard; protein; 247 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human MARK3-associated protein #37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dobie KW
                                                                                                                                                          61.7%;
86.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-JUN-2002; 2002US-00174319.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUN-2002; 2002US-00174319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                   ||||| | |:|||
NRRRQQNQLLPL 220
                                                                                                                                                                                                                                                                                                                                                                                      NRRRQ--QVLPL 345
                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Freier SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-052188/05.
N-PSDB; ADI29367.
                                                                                                                                                                     Local Similarity
                                                                                                                                      Sequence 247 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JS2003232771-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-APR-2004
                                                                                                                                                                                217;
                                                                                                                 disorders
                                                                                                                                                                                                                                                  156
                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                             216
                                                                                                                                                                                                                                                                                                                                                                149
                                                                                                                                                                                                                                                                                                                                                                                     336
                                                                                                                                                                                                                                                                                                                                                                                                           209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADI29249;
                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ward DT,
                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  888888888888888888
                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                        ठे
                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                        8
```

```
The invention relates to a compound comprising a sequence comprising 8-80 base pairs (bp) targeted to a nucleic acid encoding MARX3 (MAP/microtubule affinity-regulating kinase 3), that specifically hybridises with the nucleic acid encoding MARX3 and inhibits expression of MARX3, i.e. is an antisense oligonucleotide (AO). Also included are a composition comprising the compound and a carrier or diluent, inhibiting the expression of MARX3 in cells or tissues, treating an animal having or suspected of having a disease or condition associated with MARX3 and screening for an antisense compound. The antisense oligonucleotide is useful for preparing a composition for treating hyperproliferative disorder, particularly cancer and neurodegenerative diseases e.g. Alzheimer's disease. The present sequence is a MARX3 associated protein included in the figures but not mentioned anywhere else in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156 AYTDYVATRWYRAPELLVGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIR 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TLVETGFRHVDQAGLELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPE 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TL-----GKLIPRHQSIPKSNGFFHGISIPEPE 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276 DMETLEEKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGR 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DMETLEEKFSDVHPVALNFMKGCLKANPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGR 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NGVADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96 NGVADGVIKSVLWQTLQALNFCHIHNCIHRDIKPENILITKQGIIKICDFGFAQILIPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
expression of MARK3 or for treating cancer or Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1123; DB 8; Length 247; Pred. No. 1e-111; 1; Mismatches 0; Indels 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster polypeptide SEQ ID NO 16146
                                                                       Disclosure, SEQ ID NO 169; 233pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABB63118 standard; protein; 392 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61.7%;
86.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-2000; 2000US-0191637P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-MAR-2001; 2001WO-US009231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NRRRQ--QVLPL 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NRRROONOLLPL 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 247 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PEKE ) PE CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pharmaceutical
```

WO200279449-A2

is

```
The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention iseful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL16176-ABL30511), expressed DNA ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                               New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signaling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                          DB 4; Length 392;
                                                                                                                                 Disclosure; SEQ ID NO 16146; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298 CLKMNPDDRLTCSQLLESSYFDSF~-QEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.0%; Score 1001.5; DB 53.0%; Pred. No. 2.6e-98; rative 65; Mismatches 61
                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 184; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                              N-PSDB; ABL07221
                                                                                                                                                                                                                                                                                                                                                     Sequence 392 AA;
                                                                                                 interactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYIDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                    217
                                                                                                                                          PNLVNLIEVFRRKRKAMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                      121 GCLHRDIKPENILLTAQGQVKLCDFGFARMLSPGENYTDYVATRWYRAPELLVGDTQYGT 180
                                                                                                                                                                                                                                                                                                                                          SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218 ------GDLLPRHIQIFGQNEYFKGITLPVPPTLEPLEDKMPAKSQQNPLTIDFLKK 268
                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                         181 PVDVWAIGCLFAELVRGEALWPGRSDVDQLYLIRKTL-------
                                                                                                                                                                                                                                                                                                                                                                                                                                           241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKF---SDVHPVALNFMKG
61; Indels 37; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human MDDT polypeptide SEQ ID 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABU11689 standard; protein; 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABU11689,
```

```
MDDT; human; disease detection and treatment molecule polypeptide; anti-inflammatory; immunosuppressive; osteopathic; cytostatic; anti-HIV; heamostatic; nephrotropic; antianaemic; antipsoriatic; hepatotropic; gene therapy; protein replacement herapy; cell proliferative disorder; cancer; adenocarcinoma; leukaemia; lymphoma; melanoma; myeloma; sarcoma; anaemia; Crohn's disease; acquired immunodeficiency syndrome; AIDS; Goodpasture's syndrome; inflammation; osteoporosis; thrombocytopaemia;
                                                                                                                                                                                                                                                                                    psoriasis; hepatitis,
                                                                                                                                                                                                                                                                                                                       Homo sapiens
```

180 185

ŠV 187

186

g

9 65

```
This invention describes a novel disease detection and treatment molecule polypeptide (MDDT) which has anti-inflammatory, immunosuppressive, osteopathic, cytostatic, anti-HTV, haemostatic, nephrotropic, costeopathic, cytostatic, anti-HTV, haemostatic, nephrotropic, anti-HTV, nephrotropic, anti-HTV, nephrotropic activity. The polymucleotides and the polypeptides of the invention can be used for gene therapy, compared in replacement therapy and are useful for treating a variety of protein replacement therapy and are useful for treating a variety of diseases or conditions. These polypeptides or polymucleotides are particularly useful for diagnosing, treating or preventing cell particularly useful for diagnosing, treating or preventing cell compared in minunodeficiency syndrome (AIDS), Goodpasture's concern inflammation, osteoporosis, thrombocytopaenia, psoriasis or syndromes, inflammation, osteoporosis, thrombocytopaenia, psoriasis or compared in the disclosure of the invention. NoTE: The sequence data for this parent did not form part of the printed compared in electronic format from WIPO at the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compared the invention compa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PNLVNLIEVPRRKRKRMHLVFEYCDHTLINGLERNPNGVADGVIKSVLMQTLQALNFCHIH 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New purified disease detection and treatment molecule proteins and polymucleotides, useful for diagnosing, treating or preventing cancers (e.g. leukemia or sarcoma), anemia, Crohn's disease, AIDS, osteoporosis or hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYAATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKIGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 NCIHRDIKPENILITKOGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones AL, Tran AB, Dahl CR, Gietzen D, Chinn J;
Hillman JL, Yu JY, Tuason O, Yap PE, Amshey SR;
SC, Dam TC, Liu TF, Nguyen DA, Kleefeld Y, Gerstin IH, David MH, Lewis SA, Chen AJ, Panzer SR, Harris B;
Marwaha R, Lo A, Lan RY, Urashka ME;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.1%; Score 948; DB 6; Length 197; 98.9%; Pred. No. 5e-93; 2; Indels iive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 27; SEQ ID NO 636; 339pp + Sequence Listing; English.
                                                                                                                                                                                         29-MAR-2001; 2001US-0280067P.
29-MAR-2001; 2001US-0280068P.
16-MAY-2001; 2001US-0291280P.
17-MAY-2001; 2001US-0291829P.
                                                                                                         27-MAR-2002; 2002WO-US009944
                                                                                                                                                                                                                                                                                                  17-MAY-2001; 2001US-0291849P.
19-JUN-2001; 2001US-0299428P.
20-JUN-2001; 2001US-0299776P.
                                                                                                                                                                                                                                                                                                                                                                                     20-JUN-2001; 2001US-0300001P
                                                                                                                                                                                                                                                                                                                                                                                                                                      (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 98.9°
Matches 180; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          erty SC, Dam TC, is CH, David MH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Daugner.
Peralta CH, Davr.
V. Marwaha R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2003-058431/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; ABX34679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 197 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SV 182
                                                         10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

Search completed: April 22, 2005, 06:47:31 Job time : 101.447 secs

THIS PAGE BLANK (USPTO)

Title: Perfect score:

Sequence:

OM protein -

on:

Scoring table:

Searched:

88

Minimum Maximum

Database

```
PILVNLIEVFRKKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VASQSAGITGKLIPRHQSIPKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                            10673, A
10, Appl
10, Appl
                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATEMENT: INFORMATION:

APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Triedrich, Glean
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
FILE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 10
LENGTH: 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 347;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 1820; DB 4;
100.0%; Pred. No. 2.4e-186;
tive 0; Mismatches 0;
                                              ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-671-050-10'
; Sequence 10', Application US/09671050
; Patent No. 6716616
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: homo sapiens
US-09-671-050-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
les 347; Conserv
Query Match
Best Local S:
Matches 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10, Appl Sequence 4, Appl Sequence 12, Appl Sequence 752, Ap Sequence 11, Appl Sequence 4, Appli Sequence 4, Appli Sequence 6, Appli Sequence 10, Appl Sequence 10, Appl Sequence 10, Appl Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11236, Ap
6052, Ap
1113, App
25, Appl
26, Appl
27, Appl
115, Appl
115, Appl
115, Appl
115, Appl
116, Appl
116, Appl
116, Appl
                                                                                                                                                                                        April 22, 2005, 04:37:19 ; Search time 34.071 Seconds (without alignments) 760.272 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVPK.....RKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence Sequence S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued Patents AA:*

1: /cgn2 6/ptodatea1/iaa/5A_COMB.pep:*

2: /cgn2 6/ptodatea1/iaa/5B_COMB.pep:*

3: /cgn2 6/ptodatea1/iaa/6B_COMB.pep:*

4: /cgn2 6/ptodatea1/iaa/6B_COMB.pep:*

5: /cgn2 6/ptodatea1/iaa/PCTUS_COMB.pep:*

6: /cgn2 6/ptodatea1/iaa/PcTUS_COMB.pep:*
                         GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-671-050-10
US-09-671-050-4
US-09-671-050-4
US-09-94-016-7552
US-09-941-628-11
US-10-174-794-11
US-09-941-058-4
US-09-94-016-7954
US-09-94-016-7954
US-09-94-016-7954
US-09-94-016-7954
US-09-94-016-7954
US-09-94-016-7954
US-09-671-050-8
US-09-671-050-8
US-09-671-050-8
US-09-949-016-6052
US-09-949-016-6052
US-09-941-197-113
US-08-96-106-2053
US-09-949-016-10777
US-09-949-016-10777
US-09-949-016-10777
US-09-949-016-10777
US-09-949-016-10777
US-08-96-106-2053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-338-125-2
US-09-266-225D.14
US-09-417-197-115
US-09-411-628-13
US-10-174-794-13
US-08-176-620A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   513545 seqs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                       protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                  US-10-766-691-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43.5
43.5
31.0
31.0
```

ö

9

1612 11162.5 11162.5 11157.5 941.5 941.5 941.5 915.5 9

Score

Result No.

N

```
Score 1636; DB 4;
Pred. No. 1.1e-166;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1612; DB 4;
Pred. No. 4.2e-164;
0; Mismatches 0;
       ; FILE REFERENCE: LEX-0046-USA; CURRENT APPLICATION NUMBER: US/09/671,050; CURRENT FILING DATE: 2001-06-11; PRIOR APPLICATION NUMBER: US 60/156,511; PRIOR FILING DATE: 1999-09-28; NUMBER: OF SEQ ID NOS: 13; SOFTWARE: FastSEQ for Windows Version 4.0; SEQ ID NO 12; LENGTH: 215
                                                                                                                                                                                                                                     89.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88.6%;
                                                                                                                                                                                                                                  Query Match 89.9
Best Local Similarity 90.8
Matches 315; Conservative
                                                                                                                                                               TYPE: PRT
ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: homo sapiens
US-09-671-050-6
                                                                                                                                                                                                US-09-671-050-12
                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PNLVNLIEVFRRKRKMMILVFEYCDHTLLNELERNPNGVADGVIKSVIMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCIHRDIKPENILITKOGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                             GENERAL INFORMATION:

APPLICANT: Donoho, Gregory

APPLICANT: Donoho, Gregory

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Friedrich, Glenn

APPLICANT: Sands Arthur T.

TITLE OF INVENTION: Polynucleotides Encoding the Same

FILE REFERENCE: LEX-0046-USA

CURRENT APPLICATION NUMBER: US/09/671,050

CURRENT APPLICATION NUMBER: US 60/156,511

PRIOR APPLICATION NUMBER: US 60/156,511

PRIOR PRILING DATE: 1999-09-28

NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98.7%; Score 1796; DB 4; Length 356; 100.0%; Pred. No. 9.2e-184; Artive 0; Mismatches 0; Indels (
301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS
                     Sequence 12, Application US/09671050
Patent No. 6716616
GENERAL INFORMATION:
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Tamble, Michael
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur I.
TITLE OF INVENTION: No. 6716616el Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                    ; Sequence 4, Application US/09671050; Patent No. 6716616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.(
Matches 342; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -09-671-050-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-671-050-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                              원
 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PNLVNLIEVFRRKRKWHLVFEYCHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218 -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                         61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL--------
                                                                                                32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Application US/09671050

Sequence 6, Application US/09671050

Patent No. 6716616

GENERAL INFORMATION:

APPLICANT: Donobo, Gregory

APPLICANT: Triedrich, Glenn

APPLICANT: Friedrich, Glenn

APPLICANT: Sands, Arthur T.

TILLE OF INVENTION: No. 6716616el Human Kinase Proteins and

TILLE OF INVENTION: No. 6716616el Human Kinase Proteins

TILLE OF INVENTION: No. 6010106-11

FILE REFERENCE: LEX-00106-105

CURRENT FILING DATE: 2001-06-11

PRIOR PILING DATE: 2001-06-11

PRIOR PILING DATE: 1999-09-28

NUMBER OF SEQ ID NOS: 13

SOFTWARE: FastERQ for Windows Version 4.0

LEWING ABSTERMANE: ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS AND ALLOSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32;
Length 315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       269 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 324;
                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 90.6
Matches 310; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
```

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKOGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220 ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLLKGCL 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63.6%; Score 1157.5; DB 4; Length 358;
64.7%; Pred. No. 2.6e-115;
tive 41; Mismatches 41; Indels 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 11, Application US/10174794

Sequence 11, Application US/10174794

Batent No. 6664086

GENERAL INFORMATION:
APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707

CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR PILING DATE: 1999-10-02

NUMBER OF SEQ ID NOS: 16

SOUTWARE: SEG ID NOS: 16

SEQ ID NO 11
                                                                                                                                          Sequence 11, Application US/09411628

Sequence 11, Application US/09411628

Barent No. 6428994

GENERAL INFORMATION:

APPLICANT: UNIVERSITY Of SOUthern California

TITLE OF INVENTION: EDNA, GENOMIC, AND PREDICTED PROTEIN

TITLE OF INVENTION: EDGUENCES OF LEARNING-INDUCED KINASES

FILE REFERENCE: 13761-707

CURRENT APPLICATION NUMBER: US/09/411,628

CURRENT FILING DATE: 1999-10-01

EARLIER APPLICATION NUMBER: US 60/102,906

BARLIER PILING DATE: 1998-10-02

NUMBER OF SEQ ID NOS: 16

SOFTWARE: FREESEQ for Windows Version 4.0

SEQ ID NO 11

LENGTH: 358
                        300 KMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNE 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300 KMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            270 HMDPTERLTCEQLLHHPYFENIREIE 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-174-794-11
                                                                                                                                        US-09-411-628-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-411-628-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: VEXTER, J. Craig et al.
APPLICANT: VEXTER,
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE REPERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PNLVNLIEVPRRKRKRAHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                             121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                          218 -----GKIIPRHOSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        131 NCIHRDVKPENILLITKHSVIKLCDFGFARLLIGPSDYYTDYVATRWYRSPELLVGDTQYG 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 SSVDIWAIGCVPAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLLKGCL 278
                                                                                                                                                              121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                          SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                  241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                    PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEKYEKLAKTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMLKOLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 340 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPBPBDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63.9%; Score 1162.5; DB 4; Length 367; 63.8%; Pred. No. 7.7e-116; tive 42; Mismatches 46; Indels 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                              301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         269 MNPDDRLTCSQLLESSYFDSFQEAQIRRKARNEGRNRRRQQV 310
                                                                                                                                                                                                                                                                                     181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7552, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 63.9
Best Local Similarity 63.8
Matches 213; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-949-016-7552
                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229
                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                 ઠે
                                                                                                      원
                                                                                                                                               ò
                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
```

us-10-766-691-10.rai

```
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
US-09-949-016-7954
                                                                                                                                                                       US-10-174-794-4
                                                                                                                                                                                                                                                                                                                                                                                                        999
                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-174-794-4
                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219
                                  δ
                                                       ПP
                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                           PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                          NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLYGDTQYG 179
                                                                                                                                                                                                                                               180 SSVDIWAIGCVFABLLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                         240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                         220 ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLLKGCL 269
                                                                                                                                                                                                                                                                                                                      ---- 219
                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNLVNLIEVFRRKRKNMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                  33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47;
                                                                         Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Sequence 4, Application US/09411628
; Patent No. 6428994
; GENERAL INFORMATION:
; APPLICANT: University of Southern California
; TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
; TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES; FILE REPERENCE: 13761-707
; CURRENT APPLICATION NUMBER: US/09/411,628
; CURRENT FILING DATE: 1999-10-01
; EARLIER PILING DATE: 1999-10-02
; MUMBER OF SEQ ID NOS: 16
; SOGTWARE: FASTSEQ FOR Windows Version 4.0
                                                                                                  41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                    DB 4;
                                                                   ; Score 1157.5; DB 4;
; Pred. No. 2.6e-115;
41; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
51.7%; Score 941.5; DB 4;
Best Local Similarity 49.7%; Pred. No. 7.4e-92;
Matches 177; Conservative 67; Mismatches 65;
                                                                                                                                                                                                                                                                                                                                                                                           300 KWNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                               270 HMDPTERLTCEQLLHHPYFENIREIE 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT CORGANISM: ORGANISM: Orcytolagus cuniculus US-09-411-628-4
                                                                   tch 63.6%;
al Similarity 64.7%;
211; Conservative 4.
            ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-174-794-11
LENGTH: 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8
US-09-411-628-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGIH: 566
                                                                                                                                                                                                       62
                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                          122
                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 4
                                                                                           Matches
                                                                                                                        ð
                                                                                                                                               g
                                                                                                                                                                                              g
                                                                                                                                                                          ò
                                                                                                                                                                                                                              \delta
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                              Dp
                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
Sequence 7954, Application US/09949016

Sequence 7954, Application US/09949016

Patent No. 6812339

Each No. 6812339

Patent No. 6812339

Patent No. 6812339

TILLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TILLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REPERRINCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016
                                          240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                           219 ------GNLIPRHQELFYKNPVFAGVRLPEIKESEPLERRYPKLSEVVIDLAKKCL 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---- 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ------GNLIPRHQELFYKNPVFAGVRLPEIKESEPLERRYPKLSEVVIDLAKKCL 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                       300 KONPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                     61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300 KMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 566;
                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REPERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/10/174,794
CURRENT FILING DATE: 2002-06-18
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FRSESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51.7%; Score 941.5; DB 4;
49.7%; Pred. No. 7.4e-92;
live 67; Mismatches 65;
181 KAVDVWAIGCLVTEMLMGEPLFPGDSDIDQLYLIMRCL.
                                                                                                                                                                                                                                                                                                         ; Sequence 4, Application US/10174794
; Patent No. 6664086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT ORGANISM: Orcytolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 49.7%
Matches 177, Conservative
```

```
SEQ ID NO 10
LENGTH: 493
                                                                                                                                                                                                                                                                                                                                                  RESULT 12
US-10-174-794-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-174-794-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                  g
                                                                                           ద
                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                  ઠે
                                                                                                                                                                   g
                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180 SSVDIWAIGCVPABILITGOPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                  61 PNLVNLIEVFRRKRKMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300 KMNPDDRLTCSQLLESSYF--DSP----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                                                                                                                                   47; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.3%; Score 915.5; DB 4; Length 493; 48.3%; Pred. No. 3.7e-89; arive 68; Mismatches 69; Indels 47.
                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED FROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
TILE REPERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/09/411,628
CURRENT PILING DATE: 1999-10-01
EARLIER APPLICATION NUMBER: US 60/102,906
EARLIER PILING DATE: 1998-10-02
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 100
                                                                                                                                                                                                                                                    DB 4;
                                                                                                                                                                                                                                                                                     69;
                                                                                                                                                                                                                                                 Query Match 50.3%; Score 915.5; DB 4 Best Local Similarity 48.3%; Pred. No. 3.4e-89; Matches 172; Conservative 68; Mismatches 69
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SEQ ID NO 7954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/09411628
Patent No. 6428994
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 50.3%
Best Local Similarity 48.3%
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                 ; ORGANISM: Human
US-09-949-016-7954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-411-628-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 493
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-411-628-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PNLVNLIBVFRKRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 ENLVNLLEVCKKKKRRWYLVFEFVDHTILDDLELFPNGLDYQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYIDYVATRWYRAPELLVGDIQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                       61 PNLVNLIEVFRRKRKMHLVPEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                            NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                   300 KWNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269 HIDPDKRPFCAELLHHDFPQMDGFAERFSQELQLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300 KMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 493;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10, Application US/10174794
; Sequence 10, Application US/10174794
; Patent No. 6664086
; GENERAL INPORMATION:
; TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
; TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
; TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
; FILE REFERENCE: 13761-707
; CURRENT FILING DATE: 1999-10-01
; PRIOR PILING DATE: 1999-10-01
; PRIOR APPLICATION NUMBER: US 60/102,906
; PRIOR APLICATION NUMBER: US 60/102,906
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: FASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
50.3%; Score 915.5; DB 4;
Best Local Similarity 48.3%; Pred. No. 3.7e-89;
Matches 172; Conservative 68; Mismatches 69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
```

```
SEQ ID NO 1236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE
                                                                                      g
                                                   à
                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PNLVNLIEVFRRKRKWHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
0
                                                 APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Friedrich, Glead
APPLICANT: Friedrich, Glean
APPLICANT: Friedrich, Glean
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Zambrowicz, Brian
APPLICANT: Bands, Arthur T.
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
TITLE OF INVENTION: Polynucleotides Encoding the Same
CURRENT APPLICATION NUMBER: US/09/671,050
CURRENT FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FASTEREQ for Mindows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:

APPLICANT: Donoblo, Gregory

APPLICANT: Donoblo, Gregory

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Turner, C. Alexander Jr.

APPLICANT: Friedrich, Glenn

APPLICANT: Sands Arthur T.

ITILE OF INVENTION: No. 6716616el Human Kinase Proteins and

TITLE OF INVENTION: No. 6716616el Human Kinase Proteins and

TITLE OF INVENTION: Polynucleotides Encoding the Same

FILE REFERENCE: LEX-0046-USA

CURRENT APPLICATION NUMBER: US/09/671,050

CURRENT FILING DATE: 1999-09-28

NUMBER OF SEQ ID NOS: 13

SOFFWARE: FastSEQ for Windows Version 4.0

FROM APPLICATION NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
43.5%; Score 791; DB 4; Length 198;
Best Local Similarity 100.0%; Pred. No. 2e-76;
Matches 151; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
43.5%; Score 791; DB 4; PBest Local Similarity 100.0%; Pred. No. 1.8e-76; Matches 151; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 NCIHRDIKPENILITKOGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/09671050 Patent No. 6716616 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-671-050-8; Sequence 8, Application US/09671050; Patent No. 6716616
                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 198

TYPE: PRT

CRGANISM: homo sapiens
US-09-671-050-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 2
LENGTH: 187
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-671-050-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
```

```
61 PNLVNLIBVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                           61 PNLVNLIEVFRRKRKAMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1236, Application US/09538092

Sequence 1236, Application US/09538092

Sequence 1236, Application US/09538092

GENERAL INFORMATION:

APPLICANT: Giot, Loic

APPLICANT: Mansfield, Traci A.

TITLE OF INFORMION: Protein-Protein Complexes and Method of Using Same;

TITLE OF INFORMION: Protein-Protein Complexes and Method of Using Same;

FILE REFERENCE: 15966-542

CURRENT APPLICATION NUMBER: 00/127,352

PRIOR PELING DATE: 1099-04-01

PRIOR FILING DATE: 2000-02-01

PRIOR APPLICATION NUMBER: 60/178,965

PRIOR APPLICATION NUMBER: 60/178,965

NUMBER OF SEQ ID NOS: 1387

SOFTHARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPARE: CURRAPAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58 LKHPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNG-VADGVIKSVIMQTLQALNF 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117 CHIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGD 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   176 TQYGSSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTS 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220 ----GTPSEDTWPGVT--QLPDXKGSF------PKWTRKGLEEIVPNLEPEGR 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236 SDPPAVASQSA--GITGKLIPRHQSIFKSNGFFHGISIPEPE-DMETLEEKFSDVHPVAL 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57
                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKOLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKF---VESEDDPVVKKIALREIRMLKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178 KFYTTAVDIWSIGCIFAEMVTRKALFPGDSEIDQLFRIFRML-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; LOCATION: (0).7.(0)
... OTHER ... OTHER PROPAGE POLYPEPTIGE Accession Number Q00526,
US-09-538-092-1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : : | : : | : | : | 261 DLLMQLLQYDPSQRITAKTALAHPYFSSPEPSPAARQ 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   293 NFWKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRK 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
31.0%; Score 565; DB 4;
Best Local Similarity 36.8%; Pred. No. 6.5e-52;
Matches 124; Conservative 66; Mismatches 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: April 22, 2005, 06:52:56
Job time : 36.071 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-538-092-1236
```

```
April 22, 2005, 06:50:50 ; Search time 859.637 Seconds (without alignments) 134.334 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                              US-10-766-691-10
1820
1 MEKYEKLAKTGEGSYGVVPK......RKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/pubga/vsive_rebcoms.ppp.
/cgn2_6/ptcodata/1/pubgaa/US10D_PUBCOMB.pep:
/cgn2_6/ptcodata/1/pubgaa/US10_NEW_PUB.pep:*
/cgn2_6/ptcodata/1/pubgaa/US11_NEW_PUB.pep:*
/cgn2_6/ptcodata/1/pubgaa/US60_NEW_PUB.pep:*
/cgn2_6/ptcodata/1/pubpaa/US60_NEW_PUB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1424015 segs, 332791073 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Published_Applications_AA:*
                                                                                                                                                       OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                           Run on:
```

					SUMMAKIES		
		æ					
Result		Query	Query				
No.	Score	Match	Length	DB	ID	Description	
	1820	100.0		17	US-10-766-691-10	Sequence 10, Appl	
7	1796	98.7		17	US-10-766-691-4	Sequence 4, Appli	
٣	1636	89.9	315	17	US-10-766-691-12	Sequence 12, Appl	
4	1613	88.6		15	US-10-333-314-10	Sequence 10, Appl	
S	1612	88.6		17	US-10-766-691-6	Sequence 6, Appli	
φ	1162.5	63.9		15	US-10-363-616-391	Sequence 391, App	
7	1160.5	63.8		16	US-10-664-421-97	Sequence 97, Appl	
89	1157.5	63.6		14	US-10-174-794-11	Sequence 11, Appl	
9	1134	62.3		6	US-09-834-496A-2	Sequence 2, Appli	
10	941.5	51.7		14	US-10-174-794-4	Sequence 4, Appli	
11	915.5	50.3		14	US-10-174-794-10	Sequence 10, Appl	
12	915.5	50.3		15	US-10-369-022-22	Sequence 22, Appl	
13	915.5	50.3		16	US-10-757-262-108	Sequence 108, App	

Seguence 2, Appli Seguence 8, Appli		62	ω̈	4	20,	H	87,	7	13	'n	ŝ	4	~	ņ	ř	S	Sequence 1333, Ap	ä	31,		29	43,	103	35, A	10	7	32	equence 41,	Sequence 12, Appl	Sequence 8, Appli
US-10-766-691-2 US-10-766-691-8	-620-052A-	ò	.0-394-322A-	-0	-	US-10-072-036-113	ø	0-072-036-1		0-295-681-2	4	-09	10-394-322	US-10-620-052A-55	10-664-421-	10-664-421-5	-10-389-566-13	-10-334-143-1	-10-295-681-3	-10-295-681-3	-10-29	-10-29	-10-389-566-1	-10-25	-10-389-566-1	10-06	-10-059-585-3	US-10-177-293-41	-10-174-	US-10-204-041-8
17 17	5 16	-				4 14	m	<u>, , , , , , , , , , , , , , , , , , , </u>	18 14	18 14	7					3	15	-	3		14	3	-	. 1	-	7	7	7	7	7 14
198	45	15	30	30	30	54	29	54	29	29	50	20	57	50	57	23	5	20	52	29	29									
43.5	41.7					30.9			30.5		30.5	30.4	30.4	30.4	30.4	30.4	30.3	30.3	30.2	30.2	30.1								29.9	
791	758.5	712.5	265	565	565	563	557	557	556	556	555	554	554	554	554	554	551.5	551	550	550	548	548	546.5	546	545.5	545	545	545	545	545
14	16	17	18	19	20	21	22	23	24	25	26	27		29		31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

## ALIGNMENTS

```
US-10-766-691.10

US-10-766-691.10

Sequence 10, Application US/1076691

Publication No. US20050042626A1

GENERAL INFORMATION:
APPLICANT: Donoho, Gregory

APPLICANT: Donoho, Gregory

APPLICANT: Donoho, Gregory

APPLICANT: Sambrowicz, Brian

APPLICANT: Zambrowicz, Brian

APPLICANT: Zambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Sambrowicz, Brian

APPLICANT: Do INVENTION: WOWER: US/10/766,691

CURRENT FILING DATE: 2004-01-28

PRIOR APPLICATION NUMBER: US/09/671,050

PRIOR FILING DATE: 1999-09-28

NUMBER OF SEQ ID NOG-09-27

PRIOR FILING DATE: 1999-09-28

NUMBER PRIOR FILING DATE: 1999-09-28

NUMBER PRIOR FILING

SEQ ID NO 10

LENGTH: 347

CORETY MATCH

OQUETY MATCH

BEST LOCAL Similarity 100.0%; Pred. No. 3.6e-143;

MATCHES 347; CORSETVARTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

DD 1 MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKFVESEDDPVVKKIALREIRMIKQLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVPFKCRNKTSGOVVAVKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVAVKFVENTISGOVAVKKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVAVKFVENTISGOVAVKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVAVKFVENTISGOVAVKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVAVKFVENTISGOVAVKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVAVKFVENTISGOVAVKFVESEDDPVVKKIALREIRMIKGLKH 60

A MEKYEKLAKTGEGSYGVAVKFVENTISGOVAVKFVENTISGOVAVKFVENTISGO
```

ö

N

g õ g à 셤 ð g ò 셤

```
301 MNPDDRLTCSQLLESSYFDSFQEAQIKEKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL-----
301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1636; DB 17;
Pred. No. 6.7e-128;
0; Mismatches 0;
                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: TURNER, C. Alexander Jr.
APPLICANT: TURNER, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Briedrich, Glenn
APPLICANT: Sands, Arthur T.
ITILE OF INVENTION: Novel Human Kinase Proteins at ITILE OF INVENTION: Polynucleotides Encoding the ITILE OF INVENTION: Polynucleotides Encoding the FILE REPERENCE: LEX-0046-USA
CURRENT FILING DATE: 2004-01-28
FRIOR APPLICATION NUMBER: US/09/671,050
FRIOR APLICATION NUMBER: US 60/156,511
FRIOR FILING DATE: 1999-09-27
FRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FASTERE (FUND MICHAEL)
SEQ ID NO 12
LEMATH 315
                                                                                                               Sequence 12, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89.9%;
90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 90.8
Matches 315; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 315
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-766-691-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-333-314-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
            61 PNLVNLIEVFERKRKNMHLVFEYCDHTLINELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                              180
                                                                          240
                                                                                                                                             VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                             241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PNLVNLIEVFRRKRKRMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PNLVNLIEVFRRRRRRWHLVFEYCDHTLLNELBRNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                      NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                          SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                98.7%; Score 1796; DB 17; Length 356; llarity 100.0%; Pred. No. 3.7e-141; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                           MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/10766691
Publication No. US20050042626A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: homo sapiens
US-10-766-691-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Simi
Matches 342;
                                                         121
                                                                                                                        181
                                                                                                                                                         181
                                                                                                                                                                                          241
                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
```

```
180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 SVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPPA 240
                                                                                                                                                                                        9
                                                                                                                                                                                                                                                    61 PNLVNLIEVFRKRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                         61 PNL/NLIEVFRRRRRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                             121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                        1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                          121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218 -----GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK
                                                                   Gaps
                                                               32;
Length 315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       269 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQVLPLKS 347
                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10, Application US/10333314
Publication No. US20030211093A1
GENERAL INFORMATION:
APPLICANT: INCTE GENOMICS, INC., YUE, Henry
APPLICANT: HAFALIA, April U.A.; GURURAJAN, Rajagopal
APPLICANT: ARVIZU, Chandra S., RAMKUMAR, Narinder K.
APPLICANT: ARVIZU, Chandra S., RAMKUMAR, Jayalaxmi
APPLICANT: GANDHI, Ameena R.; POLICKX, Jennifer L.
APPLICANT: BAUGHN, Mariah R.; TRIBOULEY, Catherine
```

셤 ð g ò g ò 셤 ò

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNLVNLIEVFRKRKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218 ------GKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKTALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 15; Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Sequence 31, Application US/10363616
; Publication No US20040044181A1
; GENERAL INFORMATION:
; APPLICANT: Hyseq, Inc
; TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
; FILE REFERENCE: 2127-113 (793)
; CURRENT APPLICATION NUMBER: US/10/363,616
; CURRENT FILING DATE: 2003-03-03
; PRIOR APPLICATION NUMBER: 09/654,935
; PRIOR FILING DATE: 2000-09-01
; NUMBER OF SEQ ID NOS: 490
; SEQ ID NOS: 490
; TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
63.9%; Score 1162.5; DB 15; Length
Best Local Similarity 63.8%; Pred. No. 2e-88;
Matches 213; Conservative 42; Mismatches 46; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                        TITLE OF INVENTION: Novel Human Kinase Proteins and TITLE OF INVENTION: Novel Human Kinase Proteins and TITLE OF INVENTION: Novel Human Kinase Proteins and TITLE OF INVENTION: Polymoralectides Encoding the Same; FILE REFERENCE: LEX-0046-USA; CURRENT APPLICATION NUMBER: US/10/766,691; CURRENT FILING DATE: 2004-01-28; PRIOR APPLICATION NUMBER: US/09/671,050; PRIOR FILING DATE: 2000-09-27; PRIOR FILING DATE: 2000-09-28; RIOR FILING DATE: 1999-09-28; NUMBER OF SEQ ID NOS: 13; SOFTWARE: FastESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQV 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 88.6%; Score 1612; DB 17;
Best Local Similarity 90.6%; Pred. No. 6.9e-126;
Matches 310; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                        Zambrowicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-363-616-391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-363-616-391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-766-691-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDIQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PNLVNLIEVFRRKRKMHLVPEYCDHTLLNELERNPNGVADGVIKSVLMQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218 -----GKIIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PNIVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 NCIHRDIKPENILITKQGIIKICDEGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 88.6%; Score 1613; DB 15; Length 342; Best Local Similarity 89.9%; Pred. No. 6e-126; Matches 312; Conservative 1; Mismatches 0; Indels 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQQNQLLPL 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEGRNRRRQ--QVLPL 345
APPLICANT: THORNTON, Michael B.; BANDWAN, Olga APPLICANT: NGUYEN, Danniel B.; LU, Yan APPLICANT: BURRORD, Nell; LLL, Preeti G.; APPLICANT: DING, Li; YAO, Monique G. APPLICANT: DING, Li; YAO, Monique G. APPLICANT: ELLIOTT, Vicki S.; RECIPON, Shirley A. APPLICANT: ELLIOTT, Vicki S.; RECIPON, Shirley A. APPLICANT: GREENMALD, Sara R.; TANG, Y. Tom APPLICANT: GREENMALD, Sara R.; TANG, Y. Tom APPLICANT: GITZEN, Kimberly J.; YANG, Junming APPLICANT: GITZEN, Kimberly J.; YANG, Junming APPLICANT: JACKSON, Jennifer L.; APPLICANT: JACKSON, Jennifer L.; TITLE OF INVEXTION: HUMAN KINASES FILE REFERENCE: PI-0162 USN
GURRENT APPLICATION NUMBER: US/10/333,314
CURRENT FILING DATE: 2001-07-20
PRIOR FILING DATE: 2001-07-21
PRIOR PELING DATE: 2000-07-21
PRIOR PELING DATE: 2000-07-21
PRIOR PELING DATE: 2000-07-21
PRIOR FILING DATE: 2000-07-21
PRIOR FILING DATE: 2000-07-21
PRIOR FILING DATE: 2000-08-04
PRIOR FILING DATE: 2000-08-01
NUMBER OF SEQ ID NOS: 40
SSOFTWARE: PERL PROGRAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No: 1698381CD1
US-10-333-314-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6, Application US/10766691
PUBLICATION NO. US20050042626A1
GENERAL INFORMATION:
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Friedrich, Glenn
APPLICANT: Friedrich, Glenn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-10-766-691-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEC ID NO 10
```

g

ઠે 셤 8

δ 셤 ሯ g

7

```
61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220 ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLLKGCL 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 PNLVNLLEVFRRKRRLHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/09834496A
Fatent No. US2002090701A1
GENERAL INFORMATION:
TITLE OF INVENTION: 14257 NOVEL PROTEIN KINASE MOLECULES AND
TITLE OF INVENTION: THERR USES THEREFOR
FILE REFERENCE: 38152000900
CURRENT APPLICATION NUMBER: US/09/834,496A
CURRENT APPLICATION NUMBER: 05/196,910
FRIOR FILING DATE: 2000-04-13
FRIOR FILING DATE: 2000-04-13
FRIOR FILING DATE: 2000-04-13
FRIOR FILING DATE: 2000-04-13
SORTWARE: FASTESEQ for Mindows Version 4.0
                                                                                                                                                                                                                          APPLICANT: University of Southern California
TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN
TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES
FILE REFERENCE: 13761-707
CURRENT APPLICATION NUMBER: US/10/174,794
PRIOR APPLICATION NUMBER: US/09/411,628
PRIOR PILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1999-10-01
PRIOR FILING DATE: 1998-10-02
SPRIOR FILING DATE: 1998-10-01
SPRIOR FILING DATE: 1998-10-02
NUMBER OF SEQ. ID NOS: 16
SOFTWARE: FASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63.6%; Score 1157.5; DB 14;
64.7%; Pred. No. 5.2e-88;
ive 41; Mismatches 41; II
                    300 KMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNE 333
                                             300 KMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               270 HMDPTERLICEQLIHHPYFENIREIE 295
                                                                                                                                                                  ; Sequence 11, Application US/10174794; Publication No. US20030166220A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 64.7%
Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-174-794-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-834-496A-2
                    ଚ
                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                          61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                   62 PNLVNLLEVFRRKRRLHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH 121
                                                                                                                                NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                         SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                               220 ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLLKGCL 269
2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVALKKFLESEDDPVIKKIALREIRMLKQLKH 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVIWQTLQALNPCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSVDIWAIGCVFAELLIGOPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLIKGCL 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                    240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 16; Length 338;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 97, Application US/10664421
Publication No. US20040142864A1
Publication No. US20040142864A1
Publicant INFORMATION:
APPLICANT: BERAHIM, PRABHA
APPLICANT: KUMAR, ABHINNAV
APPLICANT: KUMAR, ABHINNAV
APPLICANT: MILBURN, MICHAEL V
ITILE OF INVENTION: CRYSTAL STRUCTURE OF PIM-1 KINASE
FILE REFERENCE: 03933/0703
CURRENT APPLICATION NUMBER: US/10/664,421
FILE REPERIOR: 2003-09-16
PRIOR FILING DATE: 2003-09-16
PRIOR FILING DATE: 2002-09-20
PRIOR FILING DATE: 2002-09-20
PRIOR FILING DATE: 2002-09-16
NUMBER OF SEQ ID NOS: 169
SOFTWARE: PALCHING DATE: 3.2
                                                                                                                                                                                                                                                   300 KMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNE 333
                                                                                                                                                                                                                                                                                                                                                                                                                   2.8e-88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63.8%; Score 1160.5;
63.8%; Pred. No. 2.8e
ative 41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 213; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo sapiens
US-10-664-421-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
US-10-664-421-97
                                                                                                                                121
                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                          ò
                                                                                 g
                                                                                                                                                             셤
                                                                                                                           à
                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                            윱
                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                        à
```

g ò g ò 셤

g ò

8

61

Gaps

```
300 KMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-369-022-22;
; Sequence 22, Application US/10369022;
; Publication No. US20030203847A1;
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 46.3
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-174-794-10
                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                              61 PNLVNLIEVFRRKRKRÄGHLVFEYCDHALLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 ENLVNLLEVCKKKKRRWYLVFEFVDHTILDDLELFPNGLDDQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                 61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                  9
                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYENLGLVGEGSYGMYMKCRNKDSGRIVAIKKFLESDDDKMYKKIAMREIKLLKQLRH 60
                                                                                                                                                                                                                                                                                                              121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                     1 MGKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPIVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 49.7%; Pred. No. 8.7e-70;
Matches 177; Conservative 67; Mismatches 65; Indels 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4, Application US/10174794

Sequence 4, Application US/10174794

Publication No. US20030166220A1

GENERAL INFORMATION:

APPLICANT: UNIVERSITY OF SOUTHERN California

TITLE OF INVENTION: CDNA, GENOMIC, AND PREDICTED PROTEIN

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED KINASES

FILE REFERENCE: 13761-707

CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT FILING DATE: 2002-06-18

PRIOR APPLICATION NUMBER: US 60/102,906

PRIOR APPLICATION NUMBER: US 60/102,906

PRIOR FILING DATE: 1998-10-02

NUMBER OF SEQ ID NOS: 16

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 4

LENTH: 566
                                                                                         62.3%; Score 1134; DB 9; Length 228; 98.2%; Pred. No. 2.8e-86;
                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                     2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) ORGANISM: Orcytolagus cuniculus US-10-174-794-4
                                                                                         Query Match 62.3
Best Local Similarity 98.2
Matches 213; Conservative
                   TYPE: PRT
ORGANISM: Homo sapiens
                                                     US-09-834-496A-2
 LENGTH: 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-174-794-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

```
APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Rosenfeld, Julie Beth
APPLICANT: Rosenfeld, Julie Beth
APPLICANT: Silos-Santiago, Inmaculada
TITLE OF INVENTION: PAIN AND PAINFUL DISORDERS USING 9949, 14230, 760, 62553,
TITLE OF INVENTION: 12216, 17719, 41897, 47174, 33408, 10002, 16209, 314, 636,
TITLE OF INVENTION: 24410, 33260, 619, 15985, 69112, 2188, 224, 615, 44373,
TITLE OF INVENTION: 11424 MOLECULES
TITLE OF INVENTION: 11424 MOLECULES
TITLE OF INVENTION: 122245, 2387, 16658, 55054, 16314, 1613, 1675, 9569 OR
TITLE OF INVENTION: 12224, MOLECULES
TITLE OF INVENTION: 12224, MOLECULES
TITLE OF INVENTION: 12224, MOLECULES
TITLE OF INVENTION WHISER: US/10/369,022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 ENLVNLLEVCKKKKRRWYLVFEFVDHTILDDLELFFPNGLDYQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLTGOPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219 ------GNLIPRHQELFNKNPVFAGVRLPEIKEREPLERRYPKLSEVVIDLAKKCL 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300 KMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      324 HIDPDKRPFCAELLHHDFFQMDGFARRFSQELQLKVQKDARNVSLSKKSQNRKKEK 324
269 HVDPDKRPPCAELLHHDFFQMDGPAERFSQELQMKVQKDARNISLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47;
                                                                                                                                                          US-10-174-794-10

Sequence 10, Application US/10174794

Sequence 10, Application US/10174794

Publication No. US20030166220A1

GENERAL INFORMATION:

TITLE OF INVENTION: SEQUENCES OF LEARNING-INDUCED RINASES

FILE REFERENCE: 13761-707

CURRENT APPLICATION NUMBER: US/10/174,794

CURRENT FILING DATE: 1999-10-01

PRIOR FILING DATE: 1999-10-01

PRIOR APPLICATION NUMBER: US 60/102,906

PRIOR FILING DATE: 1999-10-02

NUMBER OF SEQ ID NOS: 16

SOFTWARE: FREESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.3%; Score 915.5; DB 1.
48.3%; Pred. No. 1.1e-67;
rative 68; Mismatches 69
```

```
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-757-262-108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 493
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-766-691-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 108, Application US/10757262
Pubblication No. US20040197825A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Silos-Santiago, Inmaculada
APPLICANT: Bilos-Santiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
APPLICANT: Bilos-Sentiago, Inmaculada
TITLE OF INVENTION: 1050, 636, 4421, 5410, 30906, 2047,
TITLE OF INVENTION: 53010, 16852, 1587, 2207, 22245, 2387, 52908, 69112, 14990,
TITLE OF INVENTION: 18547, 115, 579, 15985, 15625, 760, 18603, 2395, 2554, 8675,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PNLVNLIEVFRRKRRMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRIOR APPLICATION NUMBER: US 60/360,495
FRIOR APPLICATION NUMBER: US 60/360,495
FRIOR APPLICATION NUMBER: US 60/370,121
FRIOR APPLICATION NUMBER: US 60/370,121
FRIOR APPLICATION NUMBER: US 60/373,010
FRIOR FILING DATE: 2002-04-16
FRIOR FILING DATE: 2002-04-19
FRIOR PELIOR TILING DATE: 2002-04-19
FRIOR APPLICATION NUMBER: US 60/377,717
FRIOR APPLICATION NUMBER: US 60/377,717
FRIOR PELIOR DATE: 2002-05-03
FRIOR FILING DATE: 2002-05-03
FRIOR FILING DATE: 2002-05-03
FRIOR APPLICATION NUMBER: US 60/382,409
FRIOR APPLICATION NUMBER: US 60/385,280
FRIOR APPLICATION NUMBER: US 60/385,280
FRIOR FILING DATE: 2002-06-03
FRIOR FILING DATE: 2002-06-03
FRIOR FILING DATE: 2002-06-03
FRIOR FILING DATE: 2002-06-03
FRIOR FILING DATE: 2002-06-03
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
FRIOR FILING DATE: 2002-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300 KWNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
50.3%; Score 915.5; DB 15; Length 493;
Best Local Similarity 48.3%; Pred. No. 1.1e-67;
Matches 172; Conservative 68; Mismatches 69; Indels 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-369-022-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -10-757-262-108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 22
LENGTH: 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
```

```
32720, 4809, 14303, 16816, 17827, 32620, 577, 619, 1423, 1518, 8263, 15402, 16209, 16386, 21165, 30911, 41897, 1643, 2543, 9626, 13231, 32409, 84260, 2882, 8203, 32678 OR 55053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PNLVNLIEVFRKKKRMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEKYENLGLVGEGSYGMYMKCRNKDTGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIRTLVETGFRHVDQAGLELLISSDPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219 -----GNLIPRHQELFNKNPVFAGVRLPEIKEREPLERRYPKLSEVVIDLAKKCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300 KWNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::|| | |::|| ::|| 324
269 HIDPDKRPFCAELLHHDFFQMDGFAERFSQELQLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50.3%; Score 915.5; DB 16; Length 493; 48.3%; Pred. No. 1.1e-67; ive 68; Mismatches 69; Indels 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENG APPLICATION NUMBER: US 60/440,318
PRIOR FILING DATE: 2003-01-15
PRIOR FILING DATE: 2003-01-15
PRIOR FILING DATE: 2003-02-04
PRIOR FILING DATE: 2003-02-04
PRIOR FILING DATE: 2003-02-04
PRIOR FILING DATE: 2003-02-07
PRIOR FILING DATE: 2003-05-08
PRIOR FILING DATE: 2003-05-08
PRIOR FILING DATE: 2003-05-08
PRIOR APPLICATION NUMBER: US 60/471,614
PRIOR APPLICATION NUMBER: US 60/478,742
PRIOR APPLICATION NUMBER: US 60/479,742
PRIOR APPLICATION NUMBER: US 60/491,156
PRIOR FILING DATE: 2003-06-16
PRIOR FILING DATE: 2003-07-18
PRIOR PRIOR DATE: 2003-07-18
PRIOR APPLICATION NUMBER: US 60/491,156
PRIOR APPLICATION NUMBER: US 60/491,156
PRIOR APPLICATION NUMBER: US 60/491,156
PRIOR PRILING DATE: 2003-09-26
NUMBER OF SEQ ID NOS: 136
NUMBER OF SEQ ID NOS: 136
SOFTWARE: FRACESO FOR WINDOWS VERSION 4.0
TITLE OF INVENTION: 32720, 4809, 14303, 1
TITLE OF INVENTION: 2158, 8263, 15402, 14
TITLE OF INVENTION: 2543, 9626, 13231, 35
TITLE OF INVENTION: 55053
FILE REPERENCE: MPIO3-00/PTRINOMNIM
CURRENT APPLICATION NUMBER: US/10/757,262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Friedrich, Glenn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/1076691
Publication No. US20050042626A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 48.3
Matches 172; Conservative
```

```
ઠે
                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PNLVNLIEVFRKRKRKMHLVFEYCDHTLLABLERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PNLVNLIEVFRKKKKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PNLVNLIEVPRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43.5%; Score 791; DB 17; Length 198; 100.0%; Pred. No. 8.3e-58; tive 0; Mismatches 0; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43.5%; Score 791; DB 17; Length 187; 100.0%; Pred. No. 7.7e-58; tive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         us-1u-/66-691-8

Sequence 8, Application US/10766691

Publication No. USZO050042626A1

GENERAL INPORMATION:
APPLICANT: Donoho, Gregory
APPLICANT: Nehls, Michael
APPLICANT: Rededich, Glenn
APPLICANT: Sambrowicz, Brian
APPLICANT: Sambrowicz, Brian
APPLICANT: Sands, Arthur I.
TITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REFERENCE: LEX-0046-USA
CURRENT FILING DATE: 2004-01-28
PRIOR APPLICATION NUMBER: US/09/671,050
PRIOR PLICATION NUMBER: US 60/156,511
PRIOR PLICATION NUMBER: US 60/156,511
PRIOR PLICATION NUMBER: US 60/156,511

PRIOR PLING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 8

LENGTH: 198

LENGTH: 198

LENGTH: 198

LENGTH: 198

LENGTH: 198
APPLICANT: Zambrowicz, Brian
APPLICANT: Sands, Arthur T.
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Novel Human Kinase Proteins and
TITLE OF INVENTION: Polynucleotides Encoding the Same
FILE REFERENCE: LEX -0046-USA
CURRENT APPLICATION NUMBER: US/10/766,691
CURRENT APPLICATION NUMBER: US/09/671,050
FRIOR APPLICATION NUMBER: US/09/671,050
FRIOR APPLICATION NUMBER: US/09/671,050
FRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 NCIHRDIKPENILITKQGIIKICDFGFAQIL 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 151; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 151; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
CORGANISM: homo sapiens
US-10-766-691-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: homo sapiens
US-10-766-691-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

Search completed: April 22, 2005, 07:36:42 Job time : 860.637 secs

THIS PAGE BLANK (USPTO)

us-10-766-691-10.rpr

```
240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |:| :||| ||| ||| HDPTERLTCEQLLHHPYFENIREIE 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300 KMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
S22745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinase (EC protein kinas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein kinase (EC
                                                                                                                                                                                       April 22, 2005, 03:32:53; Search time 28.3051 Seconds (without alignments) 1179.546 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                1820
1 MEKYEKLAKTGEGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283416 seqs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                   OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S24913
S12009
B44349
A44349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S42566
S36619
S57928
JQ2243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            806011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                 US-10-766-691-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1157.5

1149.5

563.5

558.5

558.5

551.5

546.5

546.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

540.5

                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Result
No.
```

đ

	30 5 31 527	529	29.1	292 308	п п		kinase kinase
		527	29.0	297		A36074 pr S42101 pr	protein kinase (EC Drotein kinase (EC
	52	5.5	28.9	291	101		kinase
,		526	28.9	294	N 10		cyciii-dependent A protein kinase (EC
		929	28.9	296	۸,		protein kinase (EC
	52	. 5	28.7	302	40	TITIIS DE	
•	21	2.5	28.5	346	0,0		-
	7	פוני	28.3	346	4 C		process assessed by MO15/CDK-activatin
•	51	1.0	28.4	314	-		protein kinase (EC
		514	28.2	293	~ ~		protein kinase (BC protein kinase (BC
			1	•	ı		
						ALIGNMENTS	
RESULT	LT 1						
S23383 protei	823383 protein kinase	ise (E	(EC 2.7.1.37)	.37)	cdc2	c2-related KKIALRE - human	
C;Spe	ecies: H	IOmo E	C; Species: Homo sapiens (man)	(man)			
C,Dat	C,Date: 15-O	ot-19	t-1994 #sequen	uence 744	- 1	revision 15-Oct-1994 #text_change	ge 09-Jul-2004
R; Me	R; Meyerson, M.; Enders,	M.;		G.H.; Wu,	¥	C.L.; Su, L.K.; Gorka,	C.; Nelson, C.; Harlow, E.; Tsai
EMBO	EMBO J. 11,	2909-	EMBO J. 11, 2909-2917, 1992	992	Ċ	000000000000000000000000000000000000000	
A; Rei	A;Reference number:	numbe	er: S23382;	82; M	di di	MUID:92347325; PMID:1639063	
A; Acc	A, Accession: \$23383	\$233	383			-	
A:St	A;Status: nucleic acid A:Molecule type: mRNA	type: mRNA	C ACIG S. MRNA	seguence not	 0	not shown	
A; Re	A;Residues: 1-358 <mey></mey>	1-356	8 <mey></mey>				
A; Cr	oss-refe	rence	es: UNIP	ROT: Q	005	٤	PIDN:CAA47002.1; PID:936615
C; Sul	perramii ywords:	Y: KI ATP;	superiamily: Kinase-related transic Keywords: ATP; phosphotransferase;	trans	feri	sering procein; procein serine/threonine-specif	kinase nomology ic protein kinase
F;3-	278/Doma	ini.	protein	kinas	e Ā	-278/Domain: protein kinase homology <kin></kin>	
F:11	1-19/Region: protei: 4.52.127.129/Active	on: I	protein Active s	kinase AT site: Lvs.	e A'	protein kinase ATP-binding motif Active site: Lvs, Glu, Asp, Lvs #status predicted	Ct te d
	N 1	ا		S		Santa 1187 E. DB 2.	
ğë g	Guery Maccal Best Local	Simi	l Similarity	64.78	7 %	Pred. No. 2.4e-45;	3
Mat	set	11;	Conservative	ative		41; Mismatches	33; Gaps 2;
ò		1 MEK	KYEKLAKT	GEGSY	GV	TSGQVVAVKKFVESEDDI	ALREIRMLKQLKH 60
q		2 MER	 KYEKIGKI	HHHH GEGSY	= <u>₹</u>		
(	,					11071111000 111000000000000000000000000	
ờ	w	ING 19	CVNLIEVE     :	RRKRK 	=	PNLVNLIEVFRRKRKMMLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH	
qa	9	N	LVNLLEVE	RRKRR	H	PNLVNLLEVFRRKRRLHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH	WÓTLÓÁVNFCHKH 121
ò	121		IHRDIKPE	NILIT	XOG.	CDFGFAQILI-PGDAYTDYVATRW	RAPELLYGDTOYG 179
qq	12:	Ω.	  HRDVKPEI	NILLI	KHS		:  {         YRSPELLVGDTQYG 181
ò	18	0	VDIWAIGC	VFAEL	LTG	SSVDIWAIGCVFAELLTGOPLWPGKSDVDOLYLIRTLVETGFRHVDOAGLELLTSSDP	OAGLELLISSDPP 239
73					<u></u>		
q	182		VDVWAIGC	VFAEL	LSG	PPVDVWAIGCVFAELLSGVPLWPGKSDVDQLYLIRKTL	219

```
Query Match
Best Local Similarity 41.2<sup>3</sup>
Matches 117; Conservative
Query Match
Best Local Similarity 36.8
Matches 124, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Reference number: 150474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: I50474
                                                                                                                                                          28
                                                                                                                                                                                                                                    117
                                                                                  ઠે
                                                                                                                d
                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                        8
                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tsa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: nucleic acid sequence not shown
A;Modecule type: mRNA
A;Residues: 1-305 kmrzy
A;Cross-references: UNIPROT:Q00526; EMBL:X66357; NID:g36612; PIDN:CAA47001.1; PID:g36613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Map position: 12q13-12q13
C;Superfamily: kinase-related transforming protein; protein kinase homology
C;Superfamily: kinase-related transforming protein; protein kinase homology < C;Keywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein F;2-255/Domain: protein kinase homology < KIN>-
F;10-18/Region: protein kinase ATP-binding motif F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    м.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Meyerson, M.; Enders, G.H.; Wu, C.L.; Su, L.K.; Gorka, C.; Nelson, C.; Harlow, M.; Enders, 2917, 1992
Rabo J. 11, 2909-2917, 1992
A;Title: A family of human cdc2-related protein kinases.
A;Reference number: S23382; MUID:92347325; PMID:1639063
                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PNLVNLIEVFRRKRKMHLVFEYCDHTLLNBLERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PNLVNLLEVFRRKRELHLVFEYCDHTVLHELDRYQRGVPEHLVKSITWQTLQAVNFCHKH 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -PGDAYTDYV 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATRWYRAPELLVGDIQYGSSVDIWAIGCVFAELLITGQPLWPGKSDVDQLYLIIRTLVETG 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                        C;Superfamily: kinase-related transforming protein; protein kinase homology C;Keywords: ATP; phosphotransferase; serine/threonine-specific protein kinase F;3-296/Domain: protein kinase homology «KIN» F;11-19/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                      C;Species: Homo sapiens (man)
C;Date: 13-7an-1995 #sequence_revision 13-Jan-1995 #text_change 19-Dec-1997
C;Accession: S22745
R;Meyerson, M.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein kinase (EC 2.7.1.37) cdk3 - human
C;Species: Homo sapiens (man)
C;Date: 18-Jun-1993 #sequence_revision 18-Jun-1993 #text_change 09-Jul-2004
C;Accession: S23382, S22743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRHVDQAGLELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLE
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            51;
                                                                                                                                                                                                                                                                                                                                                                        Length 376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EKFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41; Indels
                                                                                                                                                                                                                                                                                                                                                                        DB 2;
    protein kinase KKIALRE (EC 2.7.1.-)
                                                                                                                                                                                                                                                                                                                                                                      Score 1149.5; DB Pred. No. 5.7e-45;
                                                                                                                                                                                                                                                                                                                                                                                                            41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCIHRDIKPENILITKQGIIKICDFGFAQILI-
                                                                                              submitted to the EMBL Data Library, May 1992
A,Reference number: S22743
                                                                                                                                                                                                                                                                                                                                                                    63.2%;
                                                                                                                                                                                                                  A; Cross-references: EMBL: X66359
                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 61.3% Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: GDB: 283456
                                                                                                                                                                                                                                                      A; Introns: 152/3; 170/3
                                                                                                                                                                                            A; Residues: 1-376 <MEY>
                                                                                                                                                      A; Status: preliminary A; Molecule type: mRNA
                                                                                                                                      A;Accession: S22745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: S23382
      serine/threonine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: GDB: CDK3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238
                                                                                                                                                                                                                                      Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 원
```

```
protein kinase (EC 2.7.1.37) cdc2 [similarity] - goldfish
C;Species: Carassius auratus (goldfish)
C;Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 09-Jul-2004
C;Accession: 150474
E;Kajiura, H.; Yamashita, M.; Katsu, Y.; Nagahama, Y.
Dev. Growth Differ. 35, 647-654, 1993
A;Title: Isolation and characterization of goldfish cdc2, a catalytic component of matura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Cross-references: UNIPROT:P51958; GB:D17758; NID:q471097; PIDN:BAA04605.1; PID:g471098 C;Superfamily: kinase-related transforming protein; protein kinase homology C;Keywords: ATP; phosphotransferase F;2-256/Domain: protein kinase homology <KIN>F;10-18/Region: protein kinase ATP-binding motif F;310-18/Region: protein kinase ATP-binding motif F;33,51,128,130/Active site: Lys, Glu, Asp, Lys #status predicted
                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                      116
                                                                                                                                                                                                                                                                                                                                                      CHIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGD 175
                                                                                                                                                                                                                                                                                                                                                                                       117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176 TOYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTS 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      236 SDPPAVASQSA--GITGKLIPRHQSIFKSNGFFHGISIPEPE-DMETLEEKFSDVHPVAL 292
                                                                                                                                                                         57
                                                                                                                                                                                                                                                                    58 LKHPNIVRLLDVVHNERKLYLVFEFLSQDLKKYMDSTPGSELPLHLIKSYLPQLLQGVSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60 HPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNG--VADGVIKSVLWQTLQALNFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 HPNVVRLLDVLMQESKLYLVFEFILSMDLKKYLDSIPSGQFMDPMLVKSYLYQILEGILFC
                                                                                                                      MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKF---VESEDDPVVKKIALREIRMLKQ
                                                                                                                                                                                                                                      LKHPNLVNL1EVFRRKRKMHLVFEYCDHTLLNELERNPNG-VADGVIKSVLWQTLQALNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKF-VESEDDPVVKKIALREIRMLKQLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       118 HIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDT
                                                               Gaps
                                                               48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.9%; Score 563; DB 1; Length 302; 41.2%; Pred. No. 6.7e-19;
   Length 305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----VETGFRHVDQAGLELLTSS---DPPAVASQSAGIT 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240 TFPKWKSGNLASTVKNLDKNGIDLLTKMLIYDPKRISARQAMT 283
                                                            99; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293 NFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQIKRK 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177 QYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL
31.0%; Score 565; DB 2; 36.8%; Pred. No. 5.5e-19; iive 66; Mismatches 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-302 <KAJ>
```

```
A; Molecule type: mRNA
A; Cross-references: 1-92, "R', 94-297 <LEA>
A; Cross-references: EMBL:X14227; NID:g64665; PIDN:CAA32443.1; PID:g64666
A; Cross-references: EMBL:X14227; NID:g64665; PIDN:CAA32443.1; PID:g64666
A; Ottober 151, 81-88, 1994
A; Title: Cloning of the Xenopus laevis cdk2 promoter and functional analysis in oocytes & A; Reference number: I51662; MUID:95129896; PMID:7828909
A; Reference number: I51662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Superfamily: kinase-related transforming protein, protein kinase homology
C;Keywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein ki
F;2-255/Domain: protein kinase homology «KIN»
F;10-18/Region: protein kinase ATP-binding motif
F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:P24941; GB:M68520; NID:g180177; PIDN:AAA35667.1; PID:g180178
R;Tsai, L.H.; Harlow, E.; Meyerson, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Ninomiya-Tsuji, J.; Nomoto, S.; Yasuda, H.; Reed, S.I.; Matsumoto, K.
Proc. Natl. Acad. Sci. U.S.A. 88, 9006-9010, 1991
A;Title: Cloning of a human cDNA encoding a CDC2-related kinase by complementation of
A;Reference number: A41227; MUID:92020980; PMID:1717994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ë,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELE-RNPNGVADGVIKSVLWQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---VETGFRHV----DOAGLELLISSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGIS 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 PKWIRQDFSKVVPPLDEDGRDLLAQM---LQYDSNKRISAKVALTHP-----FFRDVS 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Species: Homo sapiens (man)
C;Date: 17-Jul-1992 #sequence revision 17-Jul-1992 #text_change 09-Jul-2004
C;Accession: A41227; S17873; $16520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKIGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references: EMBL: U07979; NID: 9473584; PIDN: AAA82123.1; PID: 9473585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90; Indels
                                                       A, Cross-references: UNIPROT: P23437; UNIPROT: Q9PSU0; GB: X14227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          / Match 30.5%; Score 555; DB 2; Local Similarity 37.8%; Pred. No. 1.5e-18; nes 115; .Conservative 59; Mismatches 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein kinase (EC 2.7.1.37) cdk2 - human
N;Alternate names: Eg1 homolog; protein kinase p34
                                                                                             R;le Guellec, R. submitted to the EMBL Data Library, January 1989 A;Reference number: $15866
A;Accession: $15866
A;Molecule type: mRNA
A;Residues: 1-297 <PAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Residues: 1-298 <NIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: A41227
A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-39 <OL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein kinase (EC 2.7.1.37) cdk2 - African clawed frog
N;Alternate names: cell division control protein CDC2 homolog Eg1
N;Alternate names: cell division control protein CDC2 homolog Eg1
C;Species: Xenopus laevis (African clawed frog)
C;Date: 30-Apr-1991 #sequence revision 30-Apr-1991 #text_change 09-Jul-2004
C;Accession: A37871; S15866; Ī51662; S14410
R;Paris, J.; Le Guellec, R.; Couturier, A.; Le Guellec, K.; Omilli, F.; Camonis, J.; Mad
Proc. Natl. Acad. Sci. U.S.A. 88, 1039-1043, 1991
A;Title: Cloning by differential screening of a Xenopus cDNA coding for a protein highly A;Reference number: A37871; MUID:91126051; PMID:1704128
                                                                                  protein kinase (EC 2.7.1.37) cdc2 homolog - slime mold (Dictyostelium discoideum)
C;Species: DictyOstelium discoideum
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004
C;Accession: 840021; 839071
R;Michaelis, C.E.; Weeks, G.
Rubmitted to the EMBL Data Library, August 1992
A;Description: The unicellular organism DictyOstelium discoideum possesses a highly rela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Keywords: ATP; cell cycle control; phosphoprotein; phosphotransferase; serine/threonin F;2-254/Domain: protein kinase homology «KIN»
F;10-18/Region: protein kinase ATP-binding motif F;33,51,126,128/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Michaelis, C.; Weeks, G.
Jochim. Biophys. Acta 1179, 117-124, 1993
Title: The isolation from a unicellular organism, Dictyostelium discoideum, of a highl
Reference number: S39071; MUID:94032415; PMID:8218353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Complex: In various organisms, cdc2 has been identified as a component of the M-phase Superfamily: kinase-related transforming protein; protein kinase homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cross-references: UNIPROT:P34117; EMBL:L00652; NID:9167695; PIDN:AAA16056.1; PID:9167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240 AVASQSAGITGKLIPRHQSIF-----KSNGFFHGISIPEPEDMETLEEKFSDVHPVALN 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MEXYSKIEKIGEGTYGIVNKAKNRETGEIVALKRIRLDSEDEGVPCTAIREISLLKELKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30.7%; Score 558.5; DB 2; Length 292; 35.0%; Pred. No. 1e-18; tive 66; Mismatches 101; Indels 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TPIDIWSALCIPAEMASGRPLFPGSGTSDOLFRIFKILGTP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       294 FMKGCLKMNPDDRLTCSQLLESSYFDSFQ 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Molecule type: mRNA
Residues: 1-18,'Y',20-188,'G',190-292 <MI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : |: |: |: |: |: | : | : | ILSKMLQYDPNQRITAAAALKHPYFDGLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cross-references: EMBL:L00652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 35.0%
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                           Status: preliminary
Molecule type: mRNA
Residues: 1-292 <MIC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                      Accession: S40021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: S39071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
```

ð 셤 ઠે 셤 ò 셤 ઠે ద δ 용 ò 셤 a

9

Gaps

53;

```
Direction kinase (BC 2.7.1.37) cdc2 homolog 1 - rice C;Species: Oryza sativa (rice) (c;Species: Oryza sativa (rice) (c;Species: Oryza sativa (rice) (c;Species: Oryza sativa (rice) (c;Species: Oryza sativa (rice) (c;Species: Oryza sativa (rice) (c;Species: Oryza sativa (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice) (rice)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A,Cross-references: UNIPROT: P29618; EMBL:X60374; NID:g20342; PIDN:CAA42922.1; PID:g20343
C;Superfamily: kinase-related transforming protein; protein kinase homology
C;Keywords: ATP; phosphoprotein; phosphotransferase; serine/threonine-specific protein ki
F;2-256/Domain: protein kinase homology «KIN»
F;10-18/Region: protein kinase ATP-binding motif
F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLN-----ELERNPNGVADGVIKSVLWQTLQAL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL---VETGFRHVDQAG 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLN-----ELERNPNGVADGVIKSVLWQTLQAL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173 VGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLEL 232
kinase-related transforming protein; protein kinase homology
                                                                                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   230 LELLTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---QDLATI---VPNLEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.3%; Score 551.5; DB 2; Length 294; 34.8%; Pred. No. 2.2e-18;
                            C;Keywords: ATP; phosphotransferase

72-256/Domain: protein kinase homology «KIN»

F;10-18/Region: protein kinase ATP-binding motif

F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                      30.4%; Score 552.5; DB 2;
35.4%; Pred. No. 1.9e-18;
live 66; Mismatches 98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          290 VALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | : : | : | | | | | : | 259 AGLDLLSKMLRYEPSKRITARQALEHEYFKDLEMVQ 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68; Mismatches 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----PGVSCLPDFKTA--FPRWQA----
                                                                                                                                                                                                                                      Best Local Similarity 35.4
Matches 119; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 34.8
Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-294 <HAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               serine
                                E1A
                                                                                                                                                                                                                                                                                                                                               a cdc28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               encoding a functional p34 (cdc2)
                                adenovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A Map position: 12q13-12q13

C;Superfamily: kinase-related transforming protein; protein kinase homology
C;Superfamily: kinase-related transforming protein; protein; phosphotransferase; F;2-255/Domain: protein kinase homology «KIN»
F;10-18/Region: protein kinase ATP-binding motif
F;44.160/Binding site: phosphate (Thr) (covalent) #status predicted
F;15/Binding site: phosphate (Tyr) (covalent) #status predicted
F;15/Binding site: phosphate (Tyr) (covalent) #status predicted
                                                                                                                                                                                       A; Residues: 1-298 <TSA>
A; Cross-references: GB:X62071; NID:g312802; PIDN:CAA43985.1; PID:g312803
A; Cross-references: GB:X62071; NID:g312802; PIDN:CAA43985.1; PID:g312803
B; Elledge, S.J.; Spottewood, M.R.
EMBO J. 10, 2653-2659; 1991
A; Title: A new human p34 protein kinase, CDK2, identified by complementation of A; Reference number: S16520; MUID:91330891; PMID:1714386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PNLVNLIEVFRKKKKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLWQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----AHPFFO 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Zea mays (maize)
C;Date: 14-Feb-1992 #sequence_revision 14-Feb-1992 #text_change 28-Feb-1997
C;Accession: B40444
R;Colasanti, J.; Tyers, M.; Sundaresan, V.
Proc. Natl. Acad. Soi. US.A. 88, 3377-3381, 1991
A;Title: Isolation and characterization of CDNA clones encoding a functiona A;Reference number: A40444; MUID:91195354; PMID:2014258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---VETGFRHV----DOAGLELLTSS---DPPAVASOSAGITGKLIPRHOSIFKSNGFFH
                            cyclin A- and
                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-176,'S', 178-298 <ELL>
A;Cross-references: EMBL:X61622; NID:g29848; PIDN:CAA43807.1; PID:g29849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein kinase (EC 2.7.1.37) cdc2 homolog B - maize (fragment)
                         A;Title: Isolation of the human cdk2 gene that encodes the A;Reference number: S17873; WUID:91367262; PMID:1653904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 PKWARQDFSKVVPPLDEDGRSLLSQMLHYDPNKRISAKAAL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30.4%; Score 554; DB 2; 38.4%; Pred. No. 1.7e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38.4%; Preu. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: GDB:128984; OMIM:116953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cross-references: GB:M60526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          268 GISIPEP 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: B40444
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-294 «COL»
A;Cross-references: GB:MG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 118; Conserv
                                                                                                                          A;Status: preliminary
                                                                                                                                                                  A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DVTKPVP
                                                                                             A; Accession: S17873
                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: S16520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: GDB:CDK2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

8

47;

9

셤	:     :   :  :  :  :  :    :	OY 61 PNLVNLIEVFRKRRRHIVFEYCDHTLLNELERNPNGVAD-GVIKSVLWQTLQALNFCHI 119
ò	233 LTSSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVAL 292	DD 61 SNIVKLQDVVHSEKRLYLVFEYLDLDLKKHMDSTPDFSKDLHMIKTYLYQILRGIAYCHS 120
QQ		120 HNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQ   .
රු සි	293 NFWKGCLKWANPDDRLTCSQLLESSYFDSFQEAQ 325 :	Db 121 HRVLHRDLKPQNLLIDRRTNSLKLADFGLARAFGIPVRTFTHEVVTLWYRAPEILLGSHH 180 Qy 178 YGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLT 234
E HISSIG		Db 181 YSTPVDIWSVGCIFAEMISQKPLFPGDSEIDQLFKIFRIMGTPYEDTWR 229
S23095 protein	kinase (BC 2.7.1.37) cdc2 - Arabidoneis thaliana	Qy 235 SSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNF 294
N, Altern C; Specie	ate names: cdc2 protein homolog; CDC2a protein; cell division control protein 2 s: Arabidopsis thaliana (mouse-ear cress)	230GVTSLPDYKSAFP
C;Date: C;Access R:Imajuk	C;Date: 22-Nov-1993 #sequence revision 03-Nov-1995 #text_change 09-Jul-2004 C;Accession: S23095; A48984; JQ1337; JQ0967; S18202 R:Imajuku, Y.; Hiravama, T.; Endoh, H.; Oka, A.	Qy         295 MKGCLKNNPDDELTCSQLLESSYF 318           Db         264 LSKMLLMDPTKRINARAALEHEYF 287
FEBS Let A, Title:	t. 304, 73-77, 1992 Exon-intron organization of the Arabidopsis thaliana protein kinase genes CDC2a	
A;Refere A;Access	ince number: S23095; MUID:92316202; PMID:1618302	RESULT 11 A40444 A40444 A40444
A; Residu	LE CYDE: DNA 188: 1-294 «LIMA» «66««««««««««««««»»»»»» ««««««»»»» ««««««««	protein Ainase (b. 25) cucz nomorog a - marze C;Species: Sea mays (maize) C:Date: 10-Sep.1999
R; Inze,	9.1	
A;Title: A;Refere	Control of cell division in plants. nce number: A48984; MUID:92339744; PMID:1634002	Proc. Natl. Acad. Sci. U.S.A. 88, 3377-3381, 1991 A; Title: Isolation and characterization of cDNA clones encoding a functional p34(cdc2) hk
A; Access	ion: A48984	A;Reference number: A40444; MUID:91195354; PMID:2014258 A:Acression: A40444
A; Molecu	le type: nucleic acid	A; Accession: Andra: A; Catus: preliminary A; Majoria : moun
A,Residu A,Experi	es: 1-294 <1NZ> mental source: flower	A;Residues: 1-294 <col/>
A,Note: R,Hiraya	sequence extracted from NCBI backbone (NCBIP:109461) ma, T.; Imajuku, Y.; Anai, T.; Matsui, M.; Oka, A.	A;Cross-references: GB:M60526 C;Superfamily: kinase-related transforming protein; protein kinase homology
Gene 105 A;Title:	, 159-165, 1991 Identification of two cell-cycle-controlling cdc2 gene homologs in Arabidopsis	C;Keywords: ATP; phosphotransferase F;2-256/Domain: protein kinase homology <kin></kin>
A,Refere A,Access	nce number: JQ1337; MUID:92039027; PMID:1937013 ion: JQ1337	F;10-18/Region: protein kinase ATP-binding motif F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
A;Molecu A;Residu	Le type: mRNA tes: 1-294 <hif></hif>	tch 30.0%;
A;Cross- R;Ferrei	references: EMBL:X57839; NID:g16218; PIDN:CAA40971.1; PID:g16219 .ra, P.C.G.; Hemerly, A.S.; Villarroel, R.; Van Montagu, M.; Inze, D.	Similarity 34.1%; Pred. No. 3.6e-18; 7; Conservative 66; Mismatches 93;
Plant Cell 3, A; Title: The 1	Plant Cell 3, 531-540, 1991 A;Title: The Arabidopsis functional homolog of the p34cdc2 protein kinase.	Qy 1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREJRMLKQLKH 60
A;Refere A;Access	nce number: JQ0967; MUID:93005715; PMID:1840925 ion: JQ0967	-   -   -   -   -
A; Molecu A; Residu	le type: mRNA les: 1-294 <per></per>	Qy 61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQAL 114
A; Experi	TELEPTRICES: GB:04530/; NID:925/3/3/5; FIDN:AADZ3043.1; FID:925/3/4  MENTAL BOUNCE: flower  The The Table of the Authority of	Db 61 GNIVRLHDVVHSEKRIYLVFEYLDLDLKKFMDSCPEFAKNPTLIKSYLYQILHGV 115
C; Commer C; Geneti	it: ille processi sa any composient or the cunarycent cars cycle. 18:	Qy 115 NFCHIHNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYBAPELL 172
A; Intron	3/3; 65/2; 105/3; 163/3; 218/2; 247/3; 265/3	Db 116 AYCHSHRVLHRDLKPQNLLIDRRTNALKLADFGLARAFGIÞVRTFTHEVVTLWYRAPEIL 175
A; Descri C; Superf	A) Description: phosphotransferase; protein kinase; required for Gl to S-phase transition C; Superfamily: kinase-related transforming protein; protein kinase homology C; Kewpords: ATP: phosphotransferase; serine/threonine-specific protein k	Qy 173 VGDTQYGSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLEL 232         :     :       :
F;10-18/	Domain: protein kinase homology «KIN» Region: protein kinase ATP-binding motif	233
F; 33, 51,	127,129/Active site: Lys, Glu, Asp, Lys #status predicted	
Query Match Best Local 9 Matches 119	y Match Local Similarity 35.5%; Pred. No. 2.2e-18; nes 115; Conservative 71; Mismatches 95; Indels 43; Gaps 8;	Qy 283 KFSDVHPVALNFMKGCLKMNPDDRLTCSQLLESSYFDSFQBAQ 325
& <del>8</del>	1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60 	SULT 12

ø

```
Query Match
Best Local Similarity 40.2'
Matches 117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 29.9%
Best Local Similarity 46.6%
Matches 102; Conservative
                                                                                                                                                                                                                                                                                                                                     118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dp
                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GDB:119052; OMIM:116940
A;Map position: 10q21.1-10q21.1
C;Superfamaily: kinase-related transforming protein; protein kinase homology
C;Superfamaily: kinase-related transforming protein; protein; phosphotransferase; serine
C;Keywords: ATP; cell cycle control; mitosis; phosphoprotein; phosphotransferase; serine
F;2-256/Domain: protein kinase homology <KIN.
F;10-18/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cycle
T49271
CELL DIVISION CONTROL PROTEIN 2 HOWOLOG A - Arabidopsis thaliana
N;Alternate names: protein T7118.0.0
S;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Jun-2000 #sequence_revision 02-Jun-2000 #text_change 09-Jun-2000
S;Rieger, M.; Gabel, C.; Mueller-Auer, S.; Schaefer, M.; Zipp, M.; Mewes, H.W.; Rudd, A;Reference number: 225021
A;Reference number: 225021
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA
A;Residues: 1-297 <LEE>
A;Cross-references: UNIPROT:P06493; GB:X05360; NID:g29838; PIDN:CAA28963.1; PID:g29839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVAD-GVIKSVLWQTLQALNFCHI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HNCIHRDIKPENILITKQ-GIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQ 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------GVTS--LPDYKSAFPK-----WKPTDLETF---VPNLDPDGVDL 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Accession: A29539
R; Lee, M.G.; Nurse, P.
Nature 327, 31-35, 1987
A; Title: Complementation used to clone a human homologue of the fission yeast A; Accession: A29539; MUD:87201915; PMID:3553962
                                                                                                                                                                                                                                                                                                                                                                                         homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235 SSDPPAVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein kinase (EC 2.7.1.37) cdc2 - human
N'Alternate names: cell division control protein 2 (CDC2)
C.Species: Homo sapiens (man)
C.Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178 YGSSVDIWAIGCVFAELLIGOPLWPGKSDVDOLYLIIR---TLVETGFRHVDQAGLELLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43;
                                                                                                                                                                                                                                                                                                                                          A;Map position: 3
A;Introns: 3/3; 67/3; 105/3; 163/3; 218/2; 247/3; 265/3
C;Superfamily: kinase-related transforming protein; protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                      30.0%; Score 546.5; DB 2; Length 294; ilarity 35.2%; Pred. No. 3.6e-18; Conservative 71; Mismatches 96; Indels 43
                                                                                                                                                                                                                     A,Molecule type: DNA
A,Residues: 1-294 <RIE>
A;Cross-references: EMBL.AL132963; GSPDB:GN00061; ATSP:T21J18.20
A;Experimental source: cultivar Columbia; BAC clone T21J18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SKMLLMDPTKRINARAALEHEYF 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 295 MKGCLKMNPDDRLTCSQLLESSYF 318
                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                       Gene: ATSP:T21J18.20
                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Sim
Matches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Gene: GDB:CDC2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         264
                                                                                                                                                                                                                                                                                                      Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
```

```
protein kinase (BC 2.7.1.37) cdk2 [validated] - goldfish
C;Species: Carassius auratus (goldfish)
C;Species: Carassius auratus (goldfish)
C;Species: Carassius auratus
C;Species: Carassius
C;Accession: A44878
R;Hirai, T.; Yamashita, M.; Yoshikuni, M.; Tokumoto, T.; Kajiura, H.; Sakai, N.; Nagahame
B;Hirai, T.; Ismashita, M.; Yoshikuni, M.; Tokumoto, T.; Kajiura, H.; Sakai, N.; Nagahame
A;Hirle: Isolation and characterization of goldfish cdk2, a cognate variant of the cell of A;Reference number: A44878, MUID:92331802; PMID:1339336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-298 <HIR>
A;Cross-references: UNIPROT:P43450; GB:S40289; NID:g251619; PIDN:AAB22550.1; PID:g251620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            serine/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A/Gene: cdk2
(5/Buperfamily: kinase-related transforming protein; protein kinase homology
(5/Reywords: ATP; cell cycle control; mitosis; phosphoprotein; phosphotransferase;
F;2-255/Domain: protein kinase homology <KIN>
F;10-18/Region: protein kinase ATP-binding motif
                                                                                                                                                                                        7;
                                                                                                                                                                                                                                                                                                                                                     60 HPNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNG--VADGVIKSVLMQTLQALNFC 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDT 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 HNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQY 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                       60 HPNIVSLQDVLAQDSRLYLIFEFLSMDLKKYLDSIPPGQYMDSSLVKSYLYQILQGIVFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MEKYEKLAKIGEGSYGVVFKCRNKTSGQVVAVKKF-VESEDDPVVKKIALREIRMLKQLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNP-NGVADGVIKSVLWQTLQALNFCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A. Experimental source: oocyte A. Note: Sequence extracted from NCBI backbone (NCBIN:108782, NCBIP:108783)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240 TFPKWKRPGSLASHVKNLDENGLDLLSKMLIYDP-----AKRISGKMALNH 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------VETGFRHVDQAGLELLISS---DPPAVASQSAGITGKLIPRH 256
                                                                                                                                                                                        42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
F;14,161/Binding site: phosphate (Thr) (covalent) #status predicte
F;15/Binding site: phosphate (Tyr) (covalent) #status predicted
F;33,51,128,130/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;33,51,127,129/Active site: Lys, Glu, Asp, Lys #status predicted
                                                                                                                              Length 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.9%; Score 545; DB 1; Length 298; 46.6%; Pred. No. 4.2e-18; ive 48; Mismatches 67; Indels
                                                                                                                     29.9%; Score 545; DB 2; Length 29.
40.2%; Pred. No. 4.2e-18;
ive 58; Mismatches 74; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179 GSSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTL 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 STÄVDIWSLGCIFAEMITRKALFPGDSEIDQLFRIFRTL 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177 QYGSSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIRTL
```

```
A;Ratus: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-297 <YAN>
A;Residues: 1-297 <YAN>
A;Cross-references: UNIPROT:P48734; GB:L26547; NID:g433155; PIDN:AAA18894.1; PID:g498173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118 HIHNCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDT 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180 GYSTPVDIWSIGTIFABLATKKPLFHGDSEIDQLFRIFRALGTPNNEVWPEVESLQDYKS 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 HPNLVNLIBVFRKKKKMHLVFBYCDHTLLNELERNPNG--VADGVIKSVLWQTLQALNFC 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    177 OYGSSVDIWAIGCVFAELLIGOPLWPGKSDVDQLYLIIRTL------- 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKF-VESEDDPVVKKIALREIRMLKQLK 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cyclin-dependent kinase 1 - bovine (species: Bos primigenius taurus (cattle) (Species: 19-Dec-1997 #sequence_revision 19-Dec-1997 #text_change 09-Jul-2004 (CjAccession: 14597) Rsyang, L.; Farin, C.E. Gene 141, 283-286, 1994 A;Title: Identification of cDNAs encoding bovine cyclin B and Cdk1/Cdc2. A;Reference number: 145977; WUID:94215918; PMID:8163203
                                                                                                                                                                                                                                                                                                                                                                            A/Gene: cdk1/cdc2
C;Superfamily: kinase-related transforming protein; protein kinase homology
F;2-256/Domain: protein kinase homology <KIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75; Indels 42; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----VETGFRHVDQAGLELLTSS---DPPAVASQSAGITGKLIPRH 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 TFPKWKPGSLASHVKNLDENGLDLLSKMLIYDP-----AKRISGKMALNH 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.8%; Score 542; DB 2; Length 297; 40.2%; Pred. No. 5.7e-18; ative 57; Mismatches 75; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search completed: April 22, 2005, 06:51:39 Job time: 29.3051 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 40.2*
Matches 117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

THIS PAGE BLANK (USPTO)

us-10-766-691-10.rup

```
Q6AXJ9
                                                                                                                                       RESULT 1
                                                                                                                                              O6AXJ9
                                                                                                                                                       homo sapien
homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mus musculu
leishmania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  homo sapien
homo sapien
                                                                                                                                                                                                                                                                                                                    26axj9 brachydanio
                                                                                                                                                                                                                                                                                                                             mus musculu
                                                                                                                                                                                                                                                                                                                                                    homo sapien
                                                                                                                                                                                                                                                                                                                                                          anopheles g
caenorhabdi
                                                                                                                                                                                                                                                                                                                                                                                 oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                 homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                         mus musculu
mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                       mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                               xenopus lae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mus musculu
                                                                                                                                                                                                                                                                                                                                     homo sapien
                                                                                                                                                                                                                                                                                                                                            rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                       rattus norv
                                          April 22, 2005, 01:29:40 ; Search time 91.2054 Seconds (without alignments) 1948.255 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                          oikopleura
                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                        1 MEKYEKLAKTGEGSYGVVFK.....RKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                           066he7
000532
07qbg7
07qbg7
09u2h1
09vmn3
09ttk0
067529
09gyi2
09gyi2
09gwk0
09gwk0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09jm02
09jm01
08blf2
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9bmg2
Q8k134
Q9grt9
Q8bkr2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8wxq5
Q8bve0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8bwi8
                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9p114
                                                                                                                                                                                                                                                                                                                                                                                                                                                      08 i vw4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8b149
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                              1612378 seqs, 512079187 residues
                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STK9 HUMAN
Q8WXQ5
Q8BVE0
                                                                                                                                                                                                                                                                                                                                                  KKIA HUMAN
Q7QBG7
Q9U2H1
Q9VMN3
                                                                                                                                                                                                  Listing first 45 summaries
                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                           Q8CEQ0
Q6QUA0
Q66HE7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8BL49
Q9JM02
Q9JM01
                                                                                                                                                                                                                                                                                                                                                                                                              Q9QUKO
Q9QYI1
Q6GMD6
Q6TXH3
Q9P114
                                                                                                                                                                                                                                                                                                                                                                                        Q675R9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8K134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QBBLF2
QBBWI8
                                                                                                                Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9GRT9
                                                                                                                                                                                                                                                                                                                                                                                                         090Y12
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8IVW4
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9BMG2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8BKR2
                                                                                                                                                                                                                  UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                    Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                             length: 0
length: 2000000000
                                                                        US-10-766-691-10
1820
                                                                                                                                                                                                                                                                                               Query
Match Length DB
                                                                                                         BLOSUM62
                                                                                                                                                              DB seq
DB seq
                                                                                                                                                                                                                                                                                                                                          1158
1157.5
1009.5
1001.5
1001.5
941.5
                                                                                                                                                                                                                                                                                                                                                                                                 915.5
904.5
904.5
902
                                                                                                                                                                                                                                                                                                                                                                                                                                       893.5
758.5
758.5
758.5
                                                                          Title:
Perfect score:
                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                            1162.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     741.5
738.5
737.5
737.5
733.5
694.5
694.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              743.
                                                                                          Sequence:
                                                                                                                                Searched:
                                                                                                                                                             Minimum I
Maximum I
                                                                                                                                                                                                                   Database
                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                           No.
```

O9w6r6 fugu rubrip Q9zril triticum ae	000526 homo sapien 066ih7 xenopus tro P51958 carassius a	P23437 xenopus lae P34117 dictyosteli	Q7qkf5 anopheles g Q7rm49 plasmodium	Q6irq7 xenopus lae Q7t3l7 brachydanio	P24941 homo sapien P29618 oryza sativ	P24100 arabidopsis
Q9W6R6 Q9ZRI1	CDK3 HUMAN Q661H7 CDC2 CARAU	CDK2_XENLA	Q7QKFS Q7RM49	Q6IRQ7 Q7T3L7	CDK2_HUMAN CC21_ORYSA	CC2A_ARATH
0.01	- 2 -		0 0	0 0		н
1104	305 297	297	340 289	297 302	298 294	294
34.0	31.0	30.8	30.7	30.5 30.5		
618 565.5	565 564 64	558.5	558.5 556.5	555 555	554 551.5	551.5
33	3.5 4.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	333	3 6 6 0	4 4 2 2	4 4 6 4	45

```
RESULT 1

OGANN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO GRAN99

TO
```

```
60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                             PNLVNLIEVFRRKRKKAMHLVFFYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                           61 PNLVNLMEVERRKRKLHLVFEYCDHTVLNELDRYFRGVPEHWVKSIIWQTLQAVNFCHKQ 120
                                                                                                                                                                                                                                         121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                       9
                                                                                                                                                                           9
                                                                                                                                                1 MEKYEKLAKTGEGSYGVVPKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                     180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPP
                                                                                                                                                                                                                                                                                                   ||:||:||||||||:
|181 PPVDVWAVGCYFAELLSGAPLWPGKSDVDQLYLIRKTL--------
                                                                                                                                                                                                                                                                                                                                 240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=CS7BL/6J; TISSUE=Testis;
MEDLINE=99279553; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/63; TISSUE=Testis;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                             35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2003 (TrENBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male testis cDNA, RIKEN full-length enriched
                                                                                                   65.0%; Score 1183.5; DB 2; Length 350; 63.4%; Pred. No. 1.9e-72; live 47; Mismatches 45; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            library, clone:4933411017 product:cyclin-dependent kinase-like (CDC2_related kinase), full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                          300 KWNPDDRLTCSQLLESSYFDSFQE--AQIKRKARNEGRNRRRQQVLP 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=CS7BL/6J; TISSUB=Testis;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
RIKEN FANTOM Consortium;
                                                                              40810 MW; 9B04440EE0E38BE1 CRC64;
          SWART; SM00220; S_TKC; 1.
SWART; SM00219; TYTKC; 1.
PROSITE; PS01010; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN 1.
ATP-binding; Kinase; Transferase SEQUENCE 350 AA; 40810 MW; 9804440EE0E33BE1
                                                                                                                                                                                                                                                                                                                                                                                                                                                              352 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2003 (TrEMBLrel. 23, Created)
ProDom; PD000001; Prot_kinase; 1.
                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse)
                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                           220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=Cdkl1;
                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                 Local
                                                                                                                Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          QBCEQ0
                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
g
                                                                                                                                                                                           à
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ⋩
                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                            à
```

```
REQUENCE FROM N.A.

RC STRAIN=C57BL/6J; TISSUE-Testis;

R Adachi J., Alzawa K., Atahira S., Akimura T., Arai A., Aono H.,

RA Adachi J., Alzawa K., Atahira S., Pukunishi Y., Furuno M.,

RA Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,

RA Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,

RA Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,

RA Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,

RA Kawai J., Kojima Y., Conno H., Saito H., Saito R., Sakai K.,

RA Saano H., Saski D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,

RA Soqabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,

RA Soqabe Y., Suzuki H., Tagami R., Shibata Y., Shinagawa A., Shiraki T.,

RA Soqabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,

RA Soqabe Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,

RISEL, AKOIG781, BAC25497.1; -.

RA Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.

BR HSSP, Q00535, 1141.

BR HSSP, Q00535, 1141.

BR GO; GO:0006468; Privar binding; IEA.

GO; GO:0006468; Privar binding; IEA.

RO; GO:0006468; Privar binding; IEA.

RO; GO:0006468; Privar binding; IEA.

RICEPPC; IPR0011009; Kinase—like.

BR InterPrc; IPR001109; Kinase—like.

BR InterPrc; IPR002290; Ser_Ehr_pkinase.

RICEPPC; IPR002290; Ser_Ehr_pkinase.

RR Ffam: PP00069; Pkinase: T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE TROBE—Testis;

MEDLINE=C57BL/6J; TISSUB=Testis;

MEDLINE=C55BJ/6J; TISSUB=Testis;

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Shibata K., Itoh M., Itoh M., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Yoneda Y., Ishikawa M., Inoue Y., Kira A., Hayashizaki Y., Maramatsu M., Inoue Y., Kira A., Hayashizaki Y.; RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
                                         STRAIN=C57BL/6J; TISSUE=Testis; MEDLLHE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; MEDLLHE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y., "Normalization and subbraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PNLVNLLEVFRKKRLHLVFEYCDHTVLHELDRYQRGVPEPLVKNITWQTLQAVNFCHKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6E9F56C8080F35E0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64.8%; Score 1180; DB 2; 62.7%; Pred. No. 3.3e-72; ive 42; Mismatches 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROBLEM, PD00001; Prot Kinase; 1.
SMART; SM00220; S_TKC; 1.
PROSITE; PS00117; PROTEIN KINASE ATP; 1.
PROSITE; PS00111; PROTEIN KINASE DOM; 1.
PROSITE; PS001109; PROTEIN KINASE ST; UNKNOWN_1.
ATP-binding; Cyclin; Kinase; Transferase.
SEQUENCE 352 AA; 41023 MW; 6E9F56C8080F35E0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 222; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00069; Pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
SEQUENCE FROM N.A
```

셤

ò

셤

ઠ

셤

ò

```
RAY Strausbergy,

Rhybede=12477912, DOI=10.1073/pnas.242603899;

Rtausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Rtausner R.D., Collins F.S., Wagner L., Sheamen C.M., Schuler G.D.,

Rtausner R.D., Collins F.S.,

Altschul S.F., Zeeberg B., Buetcw K. H., Schaefer C.F., Bhat N.K.,

Rhy Diatchehot L., Maruelina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M.J., Uddin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellann N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Raha S.S., Loquellann N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Rosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Richards S., Worley K.C., Sdergren B.J., Lu X., Glübs R.A.,

Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rhiting M., Marza M., Schwutz J., Wyers R.M., Butterfield Y.S.,

Rrzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

Jones S.J., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M., Butterfield Y.S.,

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;

Rodriguez A.C., Marza M.A.;
     180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                      -------GDLIPRHQQVFSTNQYFSGVKIPDPBDMBPLELKFPNISYPALGLLKGCL 269
                                                                                                         240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63.6%; Score 1158; DB 2; Length 352;
62.6%; Pred. No. 1e-70;
.ive 45; Mismatches 49; Indels 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (SEP-2004) to the EMBL/GenBank/DDBJ databases EMBL; BC081896; AAH81896.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical protein.
SEQUENCE 352 AA; 40899 MW; DB9CDF5464E66E24 CRC64;
                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PSO0107; PROTEIN KINASE ATP; 1.
PROSITE; PSS0011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN 1.
                                                                                                                                                                                                               300 KMNPDDRLTCSQLLESSYFDSFQEAQIKRKARNE 333
                                                                                                                                                                                                                                                                270 HMDPTERLICEQLLHHPYFENIREIEDLAKEHNK 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR011009; Kinase like.
InterPro; IPR00719; Prot Kinase.
InterPro; IPR002290; Ser_bhr pkinase.
InterPro; IPR008271; Ser_thr pkinase.
InterPro; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD000001; Prot_kinase; 1.
SMART; SM00220; S_TKc; 1.
SMART; SM00219; TyrKc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00069; Pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Director MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 214; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Kidney;
                                                                                                                                                            220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                           RESULT 4
Q66HE7
ID Q66H
                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                         ò
                                                                                                                                                                                                               ઠે
                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH 61
                                                                                                                                                                                       240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S. Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; Submitted (JAN-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                           KMNPDDRLTCSQLLESSYFDSFQEA----QIKRKARNEGRNRRRQ----QVLP 344
                                                                                                                                                                                                                                                                                                                   269 HMDPAERLTCEQ1LQHPYFDSIREVGELTRQHDKPARKTLRQSRKHLTGLQYLP 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryoča, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO: 0005524; F:ATP binding; IEA.
GO; GO: 0005524; F:ATP binding; IEA.
GO; GO: 0004713; F:protein serine/threonine kinase activity; IEA.
GO; GO: 0004713; F:protein-tyrosine kinase activity; IEA.
GO; GO: 0016740; F:rransferase activity; IEA.
GO; GO: 0006468; P:protein amino acid phosphorylation; IEA.
InterPro; IPR001099; Kinase like.
InterPro; IPR002290; Ser thr pkinase.
InterPro; IPR002291; Ser thr pkinase.
InterPro; IPR01245; Tyr pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46; Indels
                                                                                                              181 PPVDVWAIGCVFAELLSGVPLWPGKSDVDQLYLIRKTL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS01017; PROTEIN_KINASE ATP; 1.
PROSITE; PS500107; PROTEIN_KINASE DOM; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; UNKNOWN_1.
ATP-binding; Cyclin; Kinase; Transferase.
SEQUENCE 358 AA; 41833 MW; 823E432BF94B77C6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Cyclin-dependent kinase-like 1 (CDC2-related kinase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63.9%; Score 1162.5; DB 2
63.8%; Pred. No. 5.2e-71;
iive 42; Mismatches 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom; PD000001; Prot kinase; 1.
SMART; SM00220; S_TKc; 1.
SMART; SM00219; TyrKc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AY525548; AAS00095.1; -. HSSP; P24941; 1B38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity varies 213; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF00069; Pkinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Name=CDKL1
                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
```

DAT TO DATE TO

g

8 셤 ò a

ð

us-10-766-691-10.rup

```
RESULT 6
Q7QBG7
                                                                                                                                                               ď
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAC
DE BERRANN
DE BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERRANN BERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                             NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                              120
                                                                                                                               SSVDIWAIGCVFAELLTGOPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                     240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                  219 ------GDLIPRHQQVFSMNQYFSGVKIPDPEDMETLELKFPNISYSALGFLKGCL 268
                   9
                                                             9
                                       MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                    PNLVNLIEVFRRKRKMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Harlow E., Tsai L.-H.;
"A family of human cdc2-related protein kinases.";
EMBO J. 11.2909-2917(1992)
-I- CATALYTIC ACTIVITY: ATP + a protein = ADP + a phosphoprotein.
-I- SIMILARITY: Belongs to the Ser/Thr protein kinase family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MIN. 603441.

GO: GO: 0004693; F: cyclin-dependent protein kinase activity; TAS. GO: GO: 0004693; F: cyclin-dependent protein kinase activity; TAS. GO: 0006469; P: protein amino acid phosphorylation; TAS. InterPro; IPR011009; Kinase like.

InterPro; IPR003719; Frot kinase.

InterPro; IPR003271; Ser thr pkin AS.

InterPro; IPR002290; Ser thr pkin AS.

InterPro; IPR002290; Ser thr pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=92347325; Pubmed=1639063;
Meyerson M., Enders G.H., Wu C.-L., Su L.-K., Gorka C., Nelson
Harlow E., Tsai L.-H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last sequence update)
05-UUL-2004 (Rel. 44, Last annotation update)
Serine/threonine-protein kinase KKIALRE (EC 2.7.1.37) (Cyclin-dependent kinase-like 1).
                                                                                                                                                                                                                                                                                                                     269 HMDPAERLTCEQLLQHPYFDSIRDVGELARPHDKPTRKTLRQ 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300 KMNPDDRLTCSQLLESSYFDSFQE-AQIKRKARNEGRNRRRQ 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       358 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; X66358; CAA47002.1; -.
EMBL; X66359; CAA47002.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDC2/CDKX subfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genew; HGNC:1781; CDKL1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; S23383; S23383.
HSSP; P24941; 1H00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMAN
                                                                                                                                                61
                                                                                                                                                                                                  121
                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200532;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KKIA HUMAN
         à
                                                 g
                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                          ò
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
NCIHRDIKPENILITKOGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                         2 MEKYEKIGKIGEGSYGVVFKCRNRDTGQIVAIKKFLESEDDPVIKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PNLVNLIEVFRRKRKRKHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220 ------GDLIPRHQQVFSTNQYFSGVKIPDPEDMEPLELKFPNISYPALGLLKGCL
                                                                                                                                                                                                                                                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anopheles gambiae str. PEST.
Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota,
Neoptera, Endopterygota, Diptera, Nematocera, Culicoidea, Anopheles.
NCBI_TaxID=180454;
                                                                                                                                                                                                                                                                                                                                     33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  which is
                                                                                                                                                                                                                                                                                      Length 358;
                                                                                                                                                                   19 ATP (By similarity).
34 ATP (By similarity).
127 Proton acceptor (By similarity).
41834 MW, 88344321F24B77C6 CRC64;
Probom, PD000001; Prot kinase; 1.
SMART; SM0220; S TKc; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE ST; 1.
ATP-binding; Serine(threonine-protein kinase; Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP, P24941; 1010.
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0006524; F:ATP binding; IEA.
GO; GO:00064672; F:protein kinase activity; IEA.
GO; GO:0006468; F:transferase activity; IEA.
GO; GO:0006468; F:protein amino acid phosphorylation; IEA.
InterPro; IPR01009; Kinase like.
InterPro; IPR008271; Ser_thr_pkin_AS.
InterPro; IPR008271; Ser_thr_pkin_AS.
                                                                                                                                                                                                                                                                                                                                     41; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Anopheles Genome Sequencing Consortium;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                 .1e-70;
                                                                                                                                                  Protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AgCP3044.
Name=agCG55557; ORFNames=ENSANGG0000012213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367 AA
                                                                                                                                                                                                                                                                                                                                     41; Mismatches
                                                                                                                                                                                                                                                                                      Score 1157.5;
Pred. No. 1.16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                270 HMDPTERLTCEQLLHHPYFENIREIE 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300 KMNPDDRLTCSQLLESSYFDSFQEAQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preliminary data.
EMBL; AAAB01008879; EAA08474.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00069; Pkinase; 1.
ProDom; PD000001; Prot_kinase; 1.
                                                                                                                                                                                                                                                                                    63.6%;
                                                                                                                                                                                                                                                                                    Query Match 63.69
Best Local Similarity 64.79
Matches 211; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                 19
34
127
                                                                                                                                                                                                                                     358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [1]
SEQUENCE FROM N.A.
                                                                                                                                                                   11
34
127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=PEST
                                                                                                                                                                                  BINDING
ACT SITE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                   BIND
                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q7QBG7
```

```
ORFNames=CG7236;
                                                                                                                                                                                                                                                                                                                                                    218
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                              ₩₩₩₩₩₩
                                                                                                                                                            g
                                                                                                                                                                                       ઠે
                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                233
                                                                                                                                                              PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                        121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                         181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                       241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSD---VHPVALNFMKG 297
                                                                                                                   9
                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                    298 CLKMNPDDRLTCSQLLESSYFDSF--QEAQIKRKARNEGRNRRRQQVLPLKS 347
                                                                                                                                                                                                                                                                                                                                                                  || :| | :| : : :| : : :| : CLDKDPAKRWSCERLATHPYFEDYITKQKEIEQTITLEQKQTGTRELKPKTS 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WormBase; WBGene00012779; Y42A5A.4.
WormPep; Y4A5A.4; CE20258

WormPep; Y4A5A.4; CE20258

WormPep; Y4A5A.4; CE20258

WormPep; Y4A5A.4; CE20258

GO; GO:0004574; F:ATP binding; IEA.

GO; GO:0004774; F:protein serine/threonine kinase activity; IEA.

GO; GO:0016740; F:transferase activity; IEA.

GO; GO:0006468; P:protein amino acid phosphorylation; IEA.

InterPro; IPR001019; Kinase.

InterPro; IPR00119; Prot kinase.

InterPro; IPR002290; Ser_thr pkinase.

InterPro; IPR008271; Ser_thr pkinase.
                                                                                            37;
                                                                   55.5%; Score 1009.5; DB.2; Length 367; 52.8%; Pred. No. 1.3e-60; ive 62; Mismatches 67; Indels 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'Genome seguence of the nematode C.elegans: A platform for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Steward C.A.;
Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AL022618; CAB63367.1; -.
HSSP; P24941; 1H00.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE_ST; UNKNOWN_1.
ATP-binding; Kinase; Transferase.
SEQUENCE 367 AA; 42402 MW; F23BDB4C5D28A5E8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
11-MAY-2004 (TrEMBLrel. 26, Last annotation update)
Hypothetical protein Y42A5A.4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=Bristol N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   investigating biology.";
Science 282:2012-2018(1998)
                                                                              Best Local Similarity 52.8 Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                             234
                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                    09U2H1
                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
   g
                                                                                                                                                                                                                            8
                                                                                                                               a
                                                                                                                                                             8
                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                  ò
```

```
MEDLINE=20196006; PubMed=10731132; DOI=10.1126/science.287.5461.2185; Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandredl M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.H., Blazej R.G., Champe M., Pfeiffer B.D., Aman K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Gabor G.L., Abril J.F., Agbayani A., An H.J., Andrews-Pfannkoch C., Baldwin D., Ballew R.M., Basu A., Berman B.P., Bhandari D., Bolshakov S., Berson R.Y., Bennes P.V., Berman B.P., Bhandari D., Bolshakov S., Borchan M.R., Bouck J., Brokstein P., Borcther P., Cadieu E., Center A., Chandra I., Cherry J.M., Cawley S., Dahlke C., Davengort L.B., Davies P., Chartis R.C., Busma D.A., Buller H., Cadieu E., Center A., Chandra I., Cherry J.M., Cawley S., Dahlke C., Davengort L.B., Davies P., Ade Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M., Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Plunkov B.C., Dunn P., Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Plunkov B.C., Dunn P., Adlodek A., Gong F., Gorrell J.H., G.Z., Guan P., Harris M., Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., Howland T.J., Wei M.H., Ibegwam C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ONLVGLIEVFKRNRKLHLVFELCDRTVLHELEKNPHGVNDELIKKIIYOLLEALKFCHSH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 SVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 VASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCLK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 MNPDDRLTCSQLLESSYFDSFQEAQIKRKARNEG----RNRRRQQVLPL 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |:|| | :||:||:|| | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila melanogaster (Fruit fly).
Eukaryota, Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63; Indels
Prodom; PD000001; Prot kinase; 1.
SMART; SM00220; S_TKc; 1.
PROSITE; PS00107; PROTEIN KINASE APP; 1.
PROSITE; PS50011; PROTEIN KINASE_DOM; 1.
PROSITE; PS00108; PROTEIN KINASE_ST; UNKNOWN 1.
ATP-binding; Hypothetical_protein; Kinase; Transferase.
SEQUENCE 353 AA; 40665 MW; 7B32260D9849CAC9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 53.4%; Pred. No. 4.3e-60;
Matches 187; Conservative 59; Mismatches 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2000 (TrEMBLrel. 13, 01-MAR-2004 (TrEMBLrel. 26, CG7236-PA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
```

φ

```
RA Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Ra Mumel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Lai Bako P., Lei Y., Lei Y., Levitz S., Kulp D., Lai Z., Lai Z., Lai Z., Lei Y., Lei Y., Lei Y., Lei Y., Lai Z., Liang Y., Lin X., Ra Liu X., Mattei B., McIntosh T.C., McIeod M.P., McPherson D., Moshrefi A., Mory M., Murphy B., Murphy L., Muzny D.M., Nelson D.L., Ra Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L., Ra Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Reinert K., Remington K., Saunders R.D., Scheeler F., Shen H., Shue B.C., Siden-Käames I., Simpson M., Skupski M. P., Smith T., Shue B.C., Stadling A.C., Stagleco M., Strupski M. P., Smith T., A Spier E., Spradling A.C., Stagleco M., Strupski M. P., Smith T., A Williams S.M., Woodager, Worley K.C., Wu D., Yang S., Yao Q.A., Ye J., Welliams S.M., Woodager, Worley K.C., Wu D., Yang S., Yao Q.A., Ye J., Zheng X.H., Zhong F.N., Zhong W., Zhou S., Zhu S., Zhu X., Smith H.O., Cheng S. M., Myers E.W., Kubin G.M., Venter J.C., The Genome sequence of Drosophila melanogaster.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kaminker J.S., Bergman C.M., Kronmiller B., Carlson J., Svirskas R., Patel S., Frise E., Wheeler D.A., Lewis S.E., Rubin G.M., Ashburner M., Celniker S.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-22426065; PubMed=12537568; Celniker S.E., Wheeler D.A., Kronmiller B., Carlson J.W., Halpern A., Patel S., Adams M., Champe M., Dugan S.P., Frise E., Hodgson A., George R.A., Hoskins R.A., Laverty T., Muzny D.M., Nelson C.R., Pacleb J.M., Park S., Pfeiffer B.D., Richards S., Sodergren E.J., Svirskas R., Tabor P.E., Wan K., Stapleton M., Sutton G.G., Venter C., Weinstock G., Scherer S.E., Myers E.W., Gibbs R.A., Rubin G.M., "Finishing a whole-genome shotqun: Release 3 of the Drosophila melanogaster euchromatic genome sequence.", Genome Biol. 3:RESEARCH0079-RESEARCH0079(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=22426069; PubMed=12537572;
Misra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S.,
Hradecky P., Huang Y., Kaminker J.S., Millburn G.H., Prochnik S.B.,
Smith C.D., Tupy J.L., Whitfied E.J., Bayraktaroglu L., Berman B.P.
Bettencourt B.R., Celniker S.B., de Grey A.D., Drysdale R.A.,
Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q.,
Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Annotation of the Drosophila melanogaster euchromatic genome: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a genomics perspective.";
Genome Biol. 3:RESEARCH0084-RESEARCH0084(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Senome Biol. 3: RESEARCH0083-RESEARCH0083 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO; GO:0000910; P:cytcokinesis; IMP.
InterPro; IPR011009; Kinase like.
InterPro; IPR000719; Prot Kinase.
InterPro; IPR0082290; Ser thr pkinase.
InterPro; IPR008271; Ser thr pkinase.
Ffam, PF00069; Pkinase; I.
SMART; SM00220; S TKC; I.
PROSITE; PS00107; PROTEIN_KINASE_ATP; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=22426070; PubMed=12537573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FlyBase; FBgn0031730; CG7236.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (MAR-2004) to the EMBL; AE003611; AAF52279.1; HSSP; P24941; 10IQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           systematic review.";
                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ntAct; Q9VMN3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ewis S.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ғ1уваве,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lyBase
```

```
m
                                                                                                                                                                                                                                 61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                  121 NCIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGS 180
                                                                                                                                                                                                                                                                                                                                                                         181 SVDIWAIGCVFABILITGOPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLBLLTSSDPPA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                             241 VASQSAGITGKLIPRHOSIFKSNGFFHGISIPEPEDMETLEEKF---SDVHPVALNFMKG 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                               218 ------GDLLPRHIQIFGQNEYFKGITLPVPPTLEPLEDKMPAKSQQNPLTIDFLKK 268
                                                                                                                                                           1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH 60
                                                                                                                                                                                                9
                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gomi H., Sun W., Finch C.E., Itohara S., Yoshimi K., Thompson R.F.; Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Balongs to the Ser/Thr protein kinase family.
EMBL; AB029045; BAA88508.1; -.
HSSP; P24941; 101Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00220; S_TKG; 1.

PROSITE; PS00107; PROTEIN KINASE ATP; 1.

PROSITE; PS001107; PROTEIN KINASE DOM; 1.

PROSITE; PS00108; PROTEIN KINASE ST; 1.

ATP-binding; Kinase; Serine/threonine-protein kinase; Transferase.

SEQUENCE 566 AA; 64052 MW; 5D57595550902EA9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:000524; F:ATP binding; IEA.
GO; GO:000524; F:ATP binding; IEA.
GO; GO:0004674; F:protein serine/threonine kinase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
GO; GO:0016740; F:transferase activity; IEA.
InterPro; IPR011009; Kinase like.
InterPro; IPR00179; Prot kinase.
InterPro; IPR002290; Ser thr pkinase.
InterPro; IPR008271; Ser thr pkinase.
InterPro; IPR008271; Ser thr pkinase.
ProDom; Pr000069; Pkinase; I.
ProDom; Pr000069; Pkinase; I.
                                                                                                                          37;
                                                                                             Length 392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 941.5; DB 2; Length 566;
Pred. No. 8.7e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               298 CLKMNPDDRLTCSQLLESSYFDSF--QEAQIKRKARNEGRNRRRQQV 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61; Indels
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; UNKNOWN_1.
ATP-binding; Kinase; Transferase.
SEQUENCE 392 AA; 44962 MW; C9627D077784E55D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-CT-2003 (TrEMBLrel. 25, Last annotation update)
Ser/Thr kinase KKIAMRE.
                                                                                         Score 1001.5; DB 2;
Pred. No. 4.9e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        566 AA
                                                                                                                            65; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                         55.0%;
53.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51.7%;
                                                                                                                         Matches 184; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Brain;
                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9TTK0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 9
   SKRR
                                                                                                                                                                                           셤
                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

271

```
61 PNLVNLIEVFRKKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPPAV 241
                                                                                                                                                                                                                                                   242 ASQSAGITGKLIPRHQSIFKSNGFFHG--ISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 ENLVNLLEVCKKKKRRWYLVFEFVDHTILDDLELFPNGLDYQVVQKYLPQIINGIGFCHSH 120
                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEKYENLGLVGEGSYGMVMKCRNKDTGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                                       CIHRDIKPENILITKQGIIKICDFGFAQILIPGDAYTDYVATRWYRAPELLVGDTQYGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=97152547; PubMed=9000130;
Taglienti C.A., Wysk M., Davis R.J.;
"Molecular cloning of the epidermal growth factor-stimulated protein kinase p56 KKIAMRE.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50.3%; Score 915.5; DB 2
48.3%; Pred. No. 4.3e-54;
tive 68; Mismatches 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                        300 KMNPDDRLTCSQLLESSYFDSF 321
                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1997 (TrEMBLrel. 02, 01-FEB-1997 (TrEMBLrel. 02, 01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P56 KKIAMRE protein kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 48.3
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=KKIAMRE;
                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q92772
Q92772;
                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
Q92772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOW WHEN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE P
                                                                                                              q
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                  g
                                                                   ठे
                                                                                                                                                                   ò
                                                                                                                                                                                                   g
                                                                                                                                                                                                                                          ठे
                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                      셤
    9
                                                                                                                                                      ENLVNLLEVCKKKKRRYLVFEFVDHTILDDLELFPNGLDDQVVQKYLFQIINGIGFCHSH 120
                                                                                                                                                                                                                                      180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                 299
                                                                                                                                                                                                                                                                                                                                                                                                         ------GNLIPRHQELFYKNPVFAGWRLPEIKESEPLERRYPKLSEVVIDLAKKCL 268
                                                                                                                            61 PNLVNLIEVFRKRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                              121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                             9
                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKHP
                                                                   1 MEKYENLGLYGEGSYGWYMKCRNKDSGRIVAIKKFLESDDDKWYKKIAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pubmed=1534333; DOI=10.1038/nature02709;

Seo H.C., Edvardsen R.B., Maeland A.D., Bjordal M., Jensen M.F.,

A Hansen A., Flaat M., Weissenbach J., Lehrach H., Wincker P.,

Reinhardt R., Chourrout D.;

Thox cluster disintegration with persistent anteroposterior order of expression in Oikopleura dioica.";

REMBL; AY49462; AAS21447.1;

B. BMBL; AY49462; AAS21447.1;

InterPro; IPR01009; Kinase activity; IEA.

InterPro; IPR01009; Striase. like.

InterPro; IPR002290; Ser_Ehr_pkinase.

InterPro; IPR002290; Ser_Ehr_pkinase.

InterPro; IPR002291; Ser_Ehr_pkinase.

InterPro; IPR002291; Ser_Ehr_pkinase.

InterPro; IPR002291; Ser_Ehr_pkinase.

InterPro; IPR002291; Ser_Ehr_pkinase.
                                                                                                                                                                                                                                                                                                                       1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                               240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300 KMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
    47; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οĘ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oikopleura dioica.
Bukaryota, Metazod, Chordata, Urochordata, Appendicularia,
Oikopleuridae, Oikopleura.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62; Indels
    65; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       385 AA; 45512 MW; 059F814421A6ADA1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Cyclin-dependent kinase-like 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.2%; Score 932; DB 2;
52.2%; Pred. No. 2.5e-55;
tive 58; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE ST; UNKNOWN 1.
    67; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00069; Pkinase; I.
ProDom; PD000001; Prot. kinase; 1.
SMART; SM00220; S.TKC; 1.
SMART; SM00219; TyTKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
    Matches 177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORFNames=006-03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cyclin; Kinase
SEQUENCE 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Macc.
                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q675R9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                요
                                                                                                                              ò
                                                                                                                                                                용
                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

9

Gaps

9 9 ω

```
-----GNLIPRHQELFYKNPVFAGVRLPEVKDAEAEPLESRYPKLPEAVISLAKK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                298 CLKMNPDDRLTCSQLLESSYF--DSF-----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                           RP SEQUENCE FROM N.A.

RP STRAIN=129/SvJ, and CS7BL/6; TISSUE=Brain;

SUBDITION OF THE CONTROL OF THOMBOON R.F., Itohara S.;

SHAIN=129/SvJ, and CS7BL/6; TISSUE=Brain;

SHABAN=129/SvJ, and CS7BL/6; TISSUE=Brain;

RL SABBAN SHABAN SHABAN SHAP SHAP STATE Thompson R.F., Itohara S.;

RL SIMILARITY: Belongs to the EMBL/GenBank/DDBJ databases.

CC -1- SIMILARITY: Belongs to the Ser/Thr protein Kinase family.

BRMEL; AB029069; BAA88439.1; JOINED.

BRMEL; AB029070; BAA88439.1; JOINED.

BREL; AB029071; BAA88439.1; JOINED.

BREL; AB029071; BAA88439.1; JOINED.

BREL; AB029071; BAA88439.1; JOINED.

BRENE; AB029072; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BRENE; AB029071; BAA88439.1; JOINED.

BROOM GO: 0004674; F: protein serine/threonine kinase activity; IEA.

GO: GO: 0004674; F: protein amino acid phosphorylation; IEA.

InterPro; IPR000719; Frotein amino acid phosphorylation; IEA.

InterPro; IPR000719; Frot Kinase.

InterPro; IPR000719; Frot kinase.

InterPro; IPR000719; Prot kinase.

InterPro; IPR000719; Prot kinase.

InterPro; IPR000719; Prot kinase.

InterPro; IPR000719; Prot kinase.

InterPro; IPR000719; Prot kinase.

BROSITE; PS001019; PROTEIN KINASE DAN; 1.

PROSITE; PS0010109; PROTEIN KINASE DAN; 1.

PROSITE; PS0010109; PROTEIN KINASE DAN; 1.

PROSITE; PS0010109; PROTEIN KINASE ST. 1.

RAMART; SMOLZOS SAPA; 64055 MW; A43B75EZE9EB86C4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEKYEKLAKTGEGSYGVVFKCRNKTSGOVVAVKKFVESEDDPVVKKIALREIRMLKOLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEKYENLGLVGEGSYGWVMKCRNKDSGRIVAIKKFLESDDDKMVKKIAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP
                                                                                                                                                                                                                                                                                                                                              Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49.7%; Score 904.5; DB 2; Length 5
48.6%; Pred. No. 2.8e-53;
ive 66; Mismatches 69; Indels
                                                                                                                                                                                                                                           05-JUL-2004 (TrEMBLrel. 13, Last sequence update)
Ser/Thr kinase KKIAMRE (Ser/Thr kinase KKIAMRE-beta)
Name-cdkl2; Synonyms=Kkm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 48.69
Matches 174; Conservative
                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                              (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                0900K0
                                                                                                                                                           RESULT 13
Q9QUK0
                                                                ð
                                                                                                   g
                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                              218
                                                                                   299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PNLVNLIEVFRKKKMHLVFEYCDHTLINELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLTGQPLMPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMET--LEEKFSDVHPVALNFMKG 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                         240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL
                                                                                                   ------GNLIPRHQELFNKNPVFAGVRLPEIKEREPLERRYPKLSEVUIDLAKKCL
                                                                                                                                                 300 KMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                                                                                                                                           269 HIDPDKRPFCAELLHHDFFQMDGFAERFSQELQLKVQKDARNVSLSKKSQNRKKEK 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MEKYENLGLVGEGSYGMYMKCRNKDSGRIVALKKFLESDDDKMYKKTAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R MGD; MGI:1858227; Cdkl2.

R MGD; MGI:1858227; Cdkl2.

R GO; GO:0005524; F:ATP binding; IEA.

R GO; GO:0004674; F:Protein serine/threonine kinase activity; IEA.

R GO; GO:0004648; F:transferase activity; IEA.

DR GO; GO:0006468; P:protein amino acid phosphorylation; IEA.

DR InterPro; IPR01009; Kinase like.

DR InterPro; IPR00119; Prot kinase.

DR InterPro; IPR00229; Ser thr pkinase.

DR InterPro; IPR008271; Ser thr pkinase.

InterPro; IPR008271; Ser thr pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Probom; PF00069; Ekinase; 1.
Probom; PF000601; Prot kinase; 1.
SMART; SM01220; S TKC; 1.
SMOSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00108; PROTEIN KINASE ST; 1.
ATP-binding; Kinase; Serine/threonine-protein kinase; Transferase.
SEQUENCE 564 AA; 63640 MM; DACDEF630CCE82D5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-C57BL/6; TISSUE=Brain;
Sarsa T., Gomi H., Sun W., Ikeda T., Thompson R.F., Itohara S.;
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: Belongs to the Ser/Thr protein kinase family.
EMBL; AB029066; BAA88428.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 564;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last annotation update)
                       69
                                                                                                                                                                                                                                                                                                                                            Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match

49.7%; Score 904.5; DB 2
Best Local Similarity 48.6%; Pred. No. 2.8e-53;
Matches 174; Conservative 66; Mismatches 69
                                                                                                                                                                                                                                                                                     564 AA
                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                 01-MAY-2000 (TrEMBLrel. 13, C. 01-MAY-2000 (TrEMBLrel. 13, L. 01-OCT-2003 (TrEMBLrel. 25, L. Ser/Thr Kinase KKIAMRE-gamma.
                                                                                                                                                                                                                                                                                                                                                                                             Name=Cdkl2; Synonyms=Kkm;
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI TaxID=10090;
                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                              Q9QYI2
ID Q9QYI2
                                                                                                                                                                                                                                             RESULT 12
                                  엄
                                                                       ò
                                                                                                        g
                                                                                                                                                 ò
                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                     ADDR KWAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò,
```

7:

Gaps

9 9 239

120

```
initiative.
                                                                                 QGGMD6;
                                                    RESULT 15
                                                                Degmoe
                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMET--LEEKFSDVHPVALNFMKG 297  
219 ------GNLIPRHQELFYKNPVFAGVRLPEVKDAEAEPLESRYPKLPEAVISLAKK 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PNLVNLIEVFRRKRKWHLVFEYCDHTLLNELERNPNGVADGVIKSVLWQTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 NCIHRDIKPENILITKQGIIKICDFGFAQIL-IPGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40 AVASOSAGITGKLIPRHOSIFKSNGFFHGISIPEPEDMET--LEEKFSDVHPVALNFMKG 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                          CLKMNPDDRLTCSQLLESSYF--DSF-----QEAQIK--RKARN-----EGRNRRRQQ 341
                                                      1 MEKYENLGLVGEGSYGMVMKCRNKDSCRIVAIKKFLESDDDKMVKKTAMREIKLLKQLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKIALREIRMLKQLKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 SSVDIWAIGCVFAELLTGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLTSSDPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATP-binding, Kinase, Serine/threonine-protein kinase, Transferase.
NON TER 329 329
                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                           GG; GG:0005524; F:ATP binding; IEA.
GG; GG:0004574; F:ATP binding; IEA.
GG; GG:001674; F:protein serine/threonine kinase activity; IEA.
GG; GG:0016468; P:protein amino acid phosphorylation; IEA.
InterPro; IPR011009; Kinase like.
InterPro; IPR00219; Prot kinase.
InterPro; IPR00229; Ser thr pkinase.
InterPro; IPR00229; Ser thr pkinase.
InterPro; IPR00829; Ser thr pkinase.
PF00069; Pkinase; I.
                                                                                                                                                                                                                                                     73; Indels 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49.6%; Score 902; DB 2; Length 329;
49.0%; Pred. No. 2.3e-53;
tive 63; Mismatches 73; IndelB '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     329 AA; 38023 MW; F72EB89E65AE8585 CRC64;
                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                               01-MAY-2000 (TrEMBLrel. 13, Last sequence
01-OCT-2003 (TrEMBLrel. 25, Last annotati
Ser/Thr kinase KKIAMRE-delta (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                        Probom; PD000001; Proc kinase; 1.
SMART; SM0220; S TKc; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00118; PROTEIN KINASE DOM; 1.
                                                                                                                                     01-MAY-2000 (TrEMBLrel. 13, Created)
                                                                                                                                                                            Name=Cdkl2; Synonyms=Kkm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 49.0%
Matches 173; Conservative
                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                  MGD; MGI:1858227; Cdkl2.
                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                 090YI1
                                                                                             RESULT 14
                                                                                                                  엄
                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
```

```
Trausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Allasher E.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Ditchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Carninci P., Frange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Brownstein M.J., Usdin T.B., Peters G.J., Abramson R.D., Mullahy S.J., Nasak S.A., McZwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Nachards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Halton E., Ketreman M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Marra M.J., Garlinka U., Schmutz J., Myers R.M., Butterfield Y.S., Jones S.J., Marra M.A., Salska U., Smailus D.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schnerch A., Schein J.E., Schner E.D., Marra M.A., Schein J.E., Schner E.D., Marra M.A., Schein J.E., Schner E.D., Marra M.A., Schein J.E., Schner E.D., Marra M.A., Schein J.E., Schner E.D., Shevel B., Schner E.D., Schein J.E., Schner E.D., Schein J.E., Schner E.D., Schein J.E., Schner E.D., Schein J.E., Schner E.D., Schein J.E., Schner E.D., Schein J.E., Schner E.D., Schner E.D., Schein J.E., Schner E.
                                                             269 CLHIDPDKRPFCADLLRHDFPOMDGFAERFSOELOLKIEKDARNNSLPKKSOK 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klein S., Gerhard D.S.;
Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Submitted (JUN-2004) to the Ser/Thr protein kinase family.
I. SIMILARITY: Belongs to the Ser/Thr protein kinase family.
BMBL; BCO741132.13;
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0004674; F:protein serine/threonine kinase activity; IEA.
GO; GO:0004740; F:protein-tyrosine kinase activity; IEA.
GO; GO:0006468; P:protein amino acid phosphorylation; IEA.
298 CLKMNPDDRLTCSQLLESSYF--DSF----QEAQIK--RKARNEGRNRRRQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   roc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                              320 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR011009; Kinase like.
InterPro; IPR00219; Prot Kinase.
InterPro; IPR002290; Ser_Thr_pkinase.
InterPro; IPR008271; Ser_thr_pkin_AS.
InterPro; IPR001245; Tyr_pkinase.
Pfam; PF00069; Pkinase; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last seq
05-JUL-2004 (TrEMBLrel. 27, Last ann
                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PD000001; Prot_kinase; 1.
SMART; SM00220; S_TKc; 1.
SMART; SM00219; TyrKc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOC443693 protein (Fragment).
Name=LOC443693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dev. Dyn. 225:384-391(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=8355;
```

```
61 ENLVNLLEVCKKKKRWYLVFEFVDRTVLDDLEQFPNGLDFNRVRKYLFQIIRGIGFCFNH 120
                                                                                                                                                                                                                                                                                                                                                                     121 NCIHRDIKPENILITKQGIIKICDFGFAQILI-PGDAYTDYVATRWYRAPELLVGDTQYG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                               180 SSVDIWAIGCVFAELLIGQPLWPGKSDVDQLYLIIRTLVETGFRHVDQAGLELLISSDPP 239
                                                                                                                                                                                                                                                                                           PNLVNLIEVFRRKRKMHLVFEYCDHTLLNELERNPNGVADGVIKSVLWOTLQALNFCHIH 120
                                                                                                                                                                                                                                                                                                                                                                                               240 AVASQSAGITGKLIPRHQSIFKSNGFFHGISIPEPEDMETLEEKFSDVHPVALNFMKGCL 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217 -----CQGNLTPRHQELFYRNPMFAGVSLPDMKEAESLERRYPKHSPVMLDLAKSCL 268
                                                                                                                                                                                                                1 MEKYEKLAKTGEGSYGVVFKCRNKTSGQVVAVKKFVESEDDPVVKKTALREIRMLKQLKH 60
                                                                                                                                                                                                                                      49.4%; Score 899; DB 2; Length 320;
48.8%; Pred. No. 3.5e-53;
Live 64; Mismatches 75; Indels 38; Gaps
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE_DOM; 1.
PROSITE; PS00108; PROTEIN KINASE_ST; 1.
ATP-binding; Kinase; Serine/threonine-protein kinase; Transferase.
NON_TER 320 320
SEQUENCE 320 AA; 37063 MW; 4CD2189603F9115F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300 KMNPDDRLTCSQLLESSYF--DSFQE---AQIKRKARNEGRNRRRQ 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HIDPEKRPACGTLLQHELFTKDNFSERFSQEIRAKLQNLSKDNSSQ 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 48.89
Matches 169; Conservative
                                                                                                                                                                                                                                                                                             61
    RRRYFS
                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

Search completed: April 22, 2005, 06:50:39 Job time : 98.2054 secs